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ENVIRON

TECHNICAL MEMORANDUM

REMEDIAL INVESTIGATION PHASE 1: SOURCE CHARACTERIZATION

Remedial Investigation/Feasibility Study
Eagle Zinc Company Site
Hillsboro, Illinois

Submitted to:

**U.S. Environmental Protection Agency, Region V
and
Illinois Environmental Protection Agency**

Submitted by:

**ENVIRON International Corporation
Deerfield, Illinois**

On behalf of

Eagle Zinc Parties

March 2003



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C O N T E N T S

I.	INTRODUCTION	1
A.	Purpose of Report	1
B.	Report Organization	2
II.	PHASE 1 – SOURCE CHARACTERIZATION	3
A.	Site Surveying	3
B.	Soil Investigation	3
C.	Sediment Investigation	6
D.	Residue Investigation	8
III.	PHYSICAL CHARACTERISTICS OF THE STUDY AREA	10
A.	Surface Features	10
B.	Local Meteorology	11
C.	Surface Water Hydrology	11
D.	Site Geology	11
E.	Site Hydrogeology	11
F.	Demography and Land Use	12
G.	Ecology	12
IV.	NATURE AND EXTENT OF CONTAMINATION	13
A.	Soil Investigation	13
B.	Sediment Investigation	14
C.	Residue Pile Investigation	16
D.	Off-Site Air Deposition	16
V.	MODIFIED SITE CONCEPTUAL MODEL	18
VI.	PHASE II SAMPLING PROGRAM	21
A.	Surface Water Samples	21
B.	Ground Water Investigation	21
C.	Collection of Additional Residue Data	22
D.	Collection of Soil pH Data	23

T A B L E S

- Table II-1: Soil Sampling Summary
Table II-2: Sediment Sampling Summary
Table II-3: Residue Sampling Summary
Table IV-1: Soil Sampling Results – Volatile Organic Compounds
Table IV-2: Soil Sampling Results – Semi – Volatile Organic Compounds

C O N T E N T S

I.	INTRODUCTION	1
	A. Purpose of Report	1
	B. Report Organization	2
II.	PHASE I – SOURCE CHARACTERIZATION	3
	A. Site Surveying	3
	B. Soil Investigation	3
	C. Sediment Investigation	6
	D. Residue Investigation	8
III.	PHYSICAL CHARACTERISTICS OF THE STUDY AREA	10
	A. Surface Features	10
	B. Local Meteorology	11
	C. Surface Water Hydrology	11
	D. Site Geology	11
	E. Site Hydrogeology	11
	F. Demography and Land Use	12
	G. Ecology	12
IV.	NATURE AND EXTENT OF CONTAMINATION	13
	A. Soil Investigation	13
	B. Sediment Investigation	14
	C. Residue Pile Investigation	16
	D. Off-Site Air Deposition	16
V.	MODIFIED SITE CONCEPTUAL MODEL	18
VI.	PHASE II SAMPLING PROGRAM	21
	A. Surface Water Samples	21
	B. Ground Water Investigation	21
	C. Collection of Additional Residue Data	22
	D. Collection of Soil pH Data	23

T A B L E S

- Table II-1: Soil Sampling Summary
Table II-2: Sediment Sampling Summary
Table II-3: Residue Sampling Summary
Table IV-1: Soil Sampling Results – Volatile Organic Compounds
Table IV-2: Soil Sampling Results – Semi – Volatile Organic Compounds

C O N T E N T S

(continued)

- Table IV-3: Soil Sampling Results – Polychlorinated Biphenyls
- Table IV-4: Soil Sampling Results – Metals
- Table IV-5: Sediment Sampling Results – Volatile Organic Compounds
- Table IV-6: Sediment Sampling Results – Semi-Volatile Organic Compounds
- Table IV-7: Sediment Sampling Results – Polychlorinated Biphenyls
- Table IV-8: Sediment Sampling Results – Metals
- Table IV-9: Residue Sampling Results

F I G U R E S

- Figure I-1: Site Location Map
- Figure I-2: Site Layout Map
- Figure II-1: Soil Boring Locations
- Figure II-2: Sediment Sample Locations
- Figure II-3: Residue Pile Sample Locations
- Figure IV-1: Soil Sampling Results Above Screening Levels
- Figure IV-2: Inferred Cadmium Exceedances of Screening Levels
- Figure IV-3: Soil Sampling Results Above Screening Levels
- Figure IV-4: Sediment Sampling Results Above Screening Levels
- Figure IV-5: Residue Pile Sampling Results
- Figure VI-1: Proposed Phase 2 Surface Water Sampling Locations
- Figure VI-2: Proposed Phase 2 Temporary Piezometer and Monitoring Well Locations

A P P E N D I C E S

- Appendix A: Topographic Survey Map
- Appendix B: Soil Boring Logs
- Appendix C: Raw XRF Screening Data
- Appendix D: Wind Rose Diagram
- Appendix E: Zinc/Cadmium Correlation for Soils

I. INTRODUCTION

A. Purpose of Report

This technical memorandum summarizes and evaluates the results of the Phase 1 Remedial Investigation (RI) conducted at the Eagle Zinc Company site (the "Site"), located in Hillsboro, Illinois. ENVIRON International Corporation (ENVIRON) has prepared this Technical Memorandum on behalf of the Eagle Zinc Parties (the "Parties") as part of the Remedial Investigation/Feasibility Study (RI/FS) for the Site. The RI/FS is being completed pursuant to the Statement of Work (SOW) contained in the December 31, 2001 Administrative Order on Consent (AOC) between the Parties and the U.S. Environmental Protection Agency (USEPA). All investigations were conducted in accordance with the AOC, the SOW, and the July 2002 *Remedial Investigation/Feasibility Study Work Plan* (the "RI/FS Work Plan").

As stated in the SOW and RI/FS Work Plan, the overall purpose of the RI is to investigate the Site's physical characteristics, identify sources of contamination, and determine the nature and extent of contamination at the Site. Consistent with the AOC governing the RI/FS, the RI has been designed to complement the prior investigations conducted at, and in the vicinity of the Site. The primary focus of the RI is to characterize the nature and extent of contamination at the site, to assess potential migration pathways by which the contaminants could impact human or ecological receptors, and to evaluate potential risks to those receptors. The RI includes two phases of investigation: Phase 1 (Source Characterization), and Phase 2 (Migration Pathway Assessment). The investigation results of the RI will be compiled and interpreted as a basis for performing a baseline risk assessment to establish the need for future remedial response activities for the Site.

The purpose of this technical memorandum is to summarize results obtained from the Phase 1 investigation, which involved the physical and chemical characterization (i.e., type, quantity, properties and concentrations) of residue piles and potential soil and sediment contaminant sources. The report also serves to refine and focus the Phase 2 RI (Migration Pathway Assessment).

B. Report Organization

Section I describes the purpose and organization of this report. Section II of this report provides a summary of the work conducted as part of the Phase 1 RI. Section III describes the physical characteristics of the areas investigated as part of the Phase 1 RI. Section IV presents the results of the Phase 1 RI, including the nature and extent of contamination. Section V presents an updated Site Conceptual Model. Section VI presents details of the Phase 2 investigation developed based on the Phase 1 results. A detailed discussion of site background information, including a description of the site, the history of the site, and a summary of previous investigations, was included in the RI/FS Work Plan and the PSE Report.

II. PHASE 1 – SOURCE CHARACTERIZATION

The Phase 1 field activities were conducted at the Site between July 8, 2002 and July 19, 2002. All field activities were conducted and/or supervised by ENVIRON. All soil borings and test excavations were conducted by Philip Services, Inc. (Philip). All laboratory analyses were conducted by EnChem, Inc. (EnChem) of Green Bay, Wisconsin. Site surveying work was conducted by Hurst-Rosche Engineers, Inc. of Hillsboro, Illinois. A preliminary ecological field survey was conducted at the site by Limno-Tech, Inc. of Ann Arbor, Michigan as part of the Ecological Risk Screening Evaluation. The results of the ecological field survey will be combined with an evaluation of the Phase 1 sediment data and Phase II surface water data and presented as part of the Baseline Risk Assessment (BRA) Report. The Phase 1 and Phase 2 Technical Memoranda and BRA Report will be integrated into the final RI Report.

A. Site Surveying

All surveying was completed by Hurst-Rosche Engineers, Inc. using a Global Positioning System (GPS) based system. The first task completed was the surveying of the pre-selected locations of 130 soil borings. Each boring location was marked with a stake and northing, easting and elevations were recorded. Based on field observations, some soil boring locations were adjusted the minimum practicable distance to allow drill rig access. Hurst-Rosche also completed the topographic survey of the Eagle Zinc property initiated in 1998 and located the Site property boundaries. A copy of the completed topographic survey map is included in Appendix A.

B. Soil Investigation

As discussed in the RI/FS Work Plan, soils in the following areas of the Site were investigated in Phase 1:

- The on-Site areas previously defined as Areas 1 through 4;
- On-Site areas located north and west of the manufacturing plant which were not sampled prior to the current RI; and
- The manufacturing plant area.

A total of 130 soil borings were completed in on-Site areas to characterize the nature and extent of organic and inorganic contaminant concentrations in soils (Figure II-1). Soil boring locations were determined in each area by randomly selecting sampling locations from an orthogonal grid, as discussed in the RI/FS Work Plan. The majority of soil borings were completed in the areas west and southwest of the manufacturing plant (Areas 1 through 4), on which raw materials and residual materials were historically stockpiled. Twenty-five (25) soil borings were completed in each of Areas 1 through 4. Soil borings were also completed in the manufacturing plant area and in the historically undeveloped northern and western portions of the site property. Ten (10) shallow soil borings were completed in each of these three areas. Figure II-1 shows all soil boring locations and Table II-1 provides details concerning the soil borings, including PID measurements.

Soil borings performed during the Phase 1 investigation were completed using a direct-push drilling apparatus (e.g., Geoprobe) equipped with 4-foot-long, 2-inch outside diameter macro-core samplers with dedicated polyethylene liners. All soil borings were sampled continuously from the ground surface to the completion depth. The completion depth was either 4 feet below ground surface (bgs) or two feet below the depth at which undisturbed¹ native soils were encountered, whichever was determined to be deeper. An experienced ENVIRON field engineer prepared a geological log for each soil boring. Soil boring logs are included in Appendix B. Field screening for organic vapors was conducted using a portable photoionization detector (PID) immediately after sample retrieval. In addition, each soil core was screened for metals concentrations using a hand-held portable X-ray fluorescence (XRF) analyzer. A stainless steel spoon was used to prepare a flat surface to take the XRF readings directly from the soil core. Two PID and

¹ Includes soils exhibiting no visually observable evidence of disturbance or mixing with surficial materials, such as Plant residues.

XRF measurements were made from the upper portion of undisturbed native soil within the soil core. All PID and XRF measurements were made from soils collected at depths greater than 1 foot bgs. The shallower measurement was taken from the uppermost interval of undisturbed native soil and below any residue materials. The deeper measurement was taken one to two feet below the shallower measurement. The actual depths of the field measurements varied, depending on the thickness of any surface residues. Table II-1 provides the thickness of surface residues encountered in each boring.

All samples collected for laboratory analysis were obtained from the uppermost one-foot interval of native soils exhibiting undisturbed characteristics. As shown in Table II-1, in all cases, sample depths were greater than 1 foot bgs. The XRF screening results were used to select which soil samples were retained for analysis of Target Analyte List (TAL) metals at the EnChem laboratory. Samples from 20% of the soil borings completed (a total of 26 samples) were retained for fixed-base laboratory analysis of TAL metals. The samples selected for laboratory analysis were generally those exhibiting the highest XRF screening results, as represented by the sum of the concentrations of the Preliminary Contaminants of Concern (PCOCs) identified for soil, sediment and residues in the RI/FS Work Plan.² The raw XRF screening data are presented in Appendix C.

PID results were used to determine which samples were analyzed for the full Target Compound List (TCL) of organic compounds, including volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), as well as polychlorinated biphenyls (PCBs). Table II-1 presents the PID screening results for soils. No PID readings above ambient background levels were measured from any of the soil cores screened and no visual evidence of soil contamination was observed (e.g., staining). Therefore, as described in the RI/FS Work Plan, the locations of the soil samples for laboratory analysis of TCL organics and PCBs were randomly selected from the borings selected for the TAL metal analyses. To collect the samples for TCL organics and PCB analysis, an additional boring was advanced immediately adjacent to the original boring location and the same soil boring/sample number was used. The samples retained for

² Antimony, arsenic, cadmium, lead, silver, and zinc.

laboratory analysis of TCL organic compounds and PCBs were collected at the same depth as the original borings. Samples from 10% of the soil borings completed (a total of 13 samples) were retained for analysis of TCL organic compounds and PCBs.

As the decision as to which borings would be sampled for TAL metals from each area could not be made until all borings in that area were completed, soil from the uppermost one foot of undisturbed soil from each soil boring was placed in a zip-locked bag, labeled and stored in a cooler on ice. Upon completion of all soil borings in a given area, the XRF data was evaluated and a decision was made as to which samples would be retained for laboratory analysis of TAL metals. Following this determination, the soil that had been stored in zip-locked bags was placed in a laboratory prepared sample jar, labeled, and placed on ice for shipment to the laboratory.

Field duplicates were collected from samples S-NA-9-2 and A4-15-2 (rate of 1 duplicate per 20 soil samples) and submitted for laboratory analysis. The field duplicates were analyzed for TAL metals or TCL organic compounds plus PCBs, depending on the original sample analyses. Samples A3-23-2 and A2-7-3 were designated as a Matrix Spike/Matrix Spike Duplicates (MS/MSDs). Table II-1 shows XRF and PID screening results for the soil borings and the borings/depths selected for laboratory analysis. Figure II-1 shows the locations of borings at which soil samples were retained for laboratory analysis.

C. Sediment Investigation

A sediment investigation was conducted in on-Site and off-Site portions of the storm water/surface water drainageways that receive storm water discharges from the Site, border the Site, and enter the Site from adjacent upgradient properties. The samples were collected as grab samples in sediment accumulation areas at representative locations in the drainage ditchesstreams. The principal objective of the sediment investigation was to characterize the nature and extent of metals impacts on sediments in the drainageways and to determine upgradient background concentrations.

As described in the RI/FS Work Plan, 16 sediment samples were collected for fixed-base laboratory analysis, including 6 samples from the eastern drainageway, and 10 samples from the western drainageway. As shown on Figure II-2, 13 of the sediment

samples were collected downgradient of Outfalls 001 or 002 or at locations that may receive storm water runoff from the site (e.g., SD-WD-8). The remaining three sediment samples (SD-ED-11, SD-WD-5 and SD-WD-10) were collected to investigate upgradient or background conditions in the drainageways or areas not believed to have been impacted by the Site.

The following procedures were used to collect sediment samples for laboratory analysis. A sample of the stream sediment was obtained using stainless steel sampling tools, none of the sediment sampling locations required collection of sediment samples through a water column.³ All samples were collected from the uppermost six-inch interval of accumulated sediments. Each sample location was screened for organic vapors using a PID. After completion of field screening at all sediment sample locations, samples were collected for laboratory analysis from undisturbed sediments immediately adjacent to the PID screening locations. Upon completion of sampling, the geographic coordinates of each sediment sample location were logged using a hand-held GPS unit. The sampling generally proceeded from downstream to upstream to minimize any impacts from disturbed sediments.

All sediment samples were analyzed for TAL metals. In addition, four of the sediment samples (25 %) were analyzed for TCL organic compounds and PCBs.⁴ A field duplicate sample was collected from sample SD-WD-9 and submitted for laboratory analysis of TAL metals, TCL organic compounds, and PCBs.⁵ In addition, sample SD-ED-12 was designated as a MS/MSD. Table II-2 provides a summary of the sediment sampling locations and samples retained for laboratory analysis.

³ As discussed in the RI/FS Work Plan, surface water flow in the upper reaches of the drainageways (i.e., those segments located on-site or close to the site) is intermittent. Surface water was present at all sediment locations except for SD-ED-11, SD-ED-14 and SD-ED-15. At these locations, the sediment samples were collected from exposed portions of the stream bed or from exposed "islands" within the stream bed.

⁴ As none of the sediment samples exhibited above-background PID readings or other field evidence of contamination, the samples selected for organic analyses were those located closest to, yet downgradient of the manufacturing area (i.e., samples SD-ED-12, SD-ED-13, SD-WD-7 and SD-WD-9/9D).

⁵ As none of the downgradient sediment samples exhibited above-background PID readings or other field evidence of contamination, the field duplicate sample was collected at SD-WD-9, the on-site sediment sampling location with the greatest potential for site impacts.

D. Residue Investigation

Each residue pile or group of piles, identified by type of material, physical appearance, or spatial considerations, was evaluated by collecting representative samples in accordance with SW846 procedures and testing the samples for metals at a fixed-based laboratory using two leaching tests: the Toxicity Characteristic Leaching Procedure (TCLP); and the Synthetic Precipitation Leaching Procedure (SPLP). The residue samples were collected from trenches excavated to the base of the piles. A total of fifteen (15) residue samples were collected and analyzed.

During inspections performed at the on-set of the Phase 1 field activities, certain piles were grouped together for sampling purposes based on size, type and proximity, some additional piles were identified (new piles designated as "NP"), and some of the previously identified piles were processed on-site by the facility to produce a zinc and carbon-rich product, resulting in additional Rotary Residue Oversize (RRO) type piles. As such, the final number and locations of the sampled piles differed slightly from the locations depicted in the RI/FS Work Plan. Table II-3 provides information concerning the piles initially identified for potential sampling in the RI/FS Work Plan, the piles or pile groups actually sampled (including rationale for combining certain piles for sampling), and the residue types represented by the piles. Due to the impending closure of the plant, all historic residue processing operations have ceased. Figure II-3 shows the residue piles and associated sample designations. One gross sample was collected from each discrete residue pile or group of piles of the same type. Each gross sample was collected as a composite of several sample increments. Based on tabulated values of the Student's "T" statistic contained in SW-846, six sample increments were composited into a single gross sample for each pile or group of piles. The locations of the sample increments were spaced evenly across the horizontal extent of each pile.

A test excavation or trench was completed at each of the six sample increment locations, extending through the entire thickness of the pile. Equal-volume samples were collected from the bucket of the excavator at three depths from within the excavation: approximately one-quarter, one-half, and three-quarter depths from the top of the excavation. The visual appearance of each sample was logged, including color, composition, and estimated particle size(s). The three samples collected from the

excavations were mixed thoroughly to create the six sample increments. The six sample increments were then mixed thoroughly to produce the gross sample for the pile(s). All sample mixing was conducted in a clean 5-gallon bucket that was decontaminated prior to collection of each gross sample.

A field duplicate was collected for sample R-RR1-4 and submitted for laboratory analysis (rate of 1 out of every 20 samples). Sample R-RR2-11 was designated the Matrix Spike/Matrix Spike Duplicate (MS/MSD). Table II-3 provides a summary of the residue samples collected and analyses performed.

III. PHYSICAL CHARACTERISTICS OF THE STUDY AREA

The physical characteristics of the areas of the Site investigated during Phase 1 of the RI were discussed in detail in the March 2002 Preliminary Site Evaluation (PSE) Report, as well as the July 2002 RI/FS Work Plan. This information was assembled through inquiries made during completion of the PSE and from previous environmental reports concerning the Site. As such, the features noted below primarily reference discussions contained in the RI/FS Work Plan. Information relevant to the Phase 1 investigation is included as appropriate.

A. Surface Features

The Site's surface topography, storm water drainage, water bodies, and physiographic setting are described in detail in Section II.A.3.b of the RI/FS Work Plan. The historic plant residues are discussed in Section II.A.4 of the RI/FS Work Plan. The completed topographic survey map of the Site is included in Appendix A. The locations of residue piles observed at the Site at the time of the Phase 1 field activities are depicted on Figure II-3. During inspections performed at the on-set of the Phase 1 field activities, certain piles were grouped together for sampling purposes based on size, type and proximity, some additional piles were identified (new piles designated as "NP"), and some of the previously identified piles were processed on-site by the facility to produce a zinc and carbon-rich product, resulting in additional Rotary Residue Oversize (RRO) type piles. As such, the final number and locations of the sampled piles differed slightly from the locations depicted in the RI/FS Work Plan. Table II-3 provides information concerning the piles initially identified for potential sampling in the RI/FS Work Plan, the piles or pile groups actually sampled (including rationale for combining certain piles for sampling), and the residue types and estimated volumes represented by the piles. Due to the impending closure of the plant, all historic residue processing operations have ceased. The thickness of surface residues encountered in each soil borings is shown in Table II-1 and on the soil boring logs contained in Appendix B.

B. Local Meteorology

Meteorological data for the Site area are provided in Section II.A.3.a of the RI/FS Work Plan. In addition to the meteorological information presented in the RI/FS Work Plan, ENVIRON obtained a wind rose diagram for the Springfield, Illinois airport, which is located approximately 30 miles north of the site, but is expected to display similar average wind directions. As shown on the wind rose diagram contained in Appendix D, which displays the dominant average wind directions and ranges of wind speed for the year 1987, the dominant wind direction is towards the north and north-northeast, with moderate frequency in other eastward directions, and the lowest frequencies in the westward directions. The prevailing northward wind direction is consistent with the generalized meteorological information provided in the RI/FS Work Plan.

C. Surface Water Hydrology

The surface water hydrology of the Site and surrounding area is described in detail in Section II.A.3.b of the RI/FS Work Plan. Additional information concerning surface water quality in the Site's drainage systems and the interaction between the southwestern pond and ground water will be collected as part of the surface water and ground water investigations conducted during Phase 2 of the RI (Migration Pathway Assessment).

D. Site Geology

Information concerning the soils, overburden units (glacial deposits) and bedrock units that underlie the Site was presented in Section II.A.3.d of the RI/FS Work Plan. The observations made during completion of the Phase 1 soil borings support the general characterization of the overburden unit within the interval investigated as brown clay, silty clay and sandy clay, which is consistent with previous soil descriptions summarized in the PSE Report and RI/FS Work Plan.

E. Site Hydrogeology

Information concerning the Site hydrogeology was presented in Section II.A.3.e of the RI/FS Work Plan. Ground water was encountered in borings A1-18, A1-22, and A4-5 at depths ranging from 8 to 24 feet bgs, which is consistent with ground water

levels measured in these areas during previous ground water investigations conducted at the site.

F. Demography and Land Use

Information reviewed during the PSE indicated that, according to the 1990 census, approximately 8,500 people lived within a 4-mile radius of the site. Land use characteristics of the Site and surrounding area are described in Section II.A.2 of the RI/FS Work Plan.

G. Ecology

As discussed above, an Ecological Risk Screening Evaluation is a component of the Baseline Risk Assessment task. As part of this evaluation, a preliminary site visit was conducted by Limno-Tech, Inc. (LTI) during implementation of the Phase 1 field activities. The objectives of the site visit were to: 1) identify on-site or relevant off-site habitats, ecological receptors, contaminant source(s) and contaminant(s) migration routes; and 2) assess to the extent possible whether a potential for present or future ecological impacts exists based on contaminants, receptor, and potential migration pathways. No conclusions concerning the ecology of the Site or adjacent areas have been made by LTI.

IV. NATURE AND EXTENT OF CONTAMINATION

A. Soil Investigation

The analytical results for the soil samples are summarized in Tables IV-1 through IV-4. As applicable or relevant and appropriate requirements (ARARs) have not been established, in accordance with USEPA RI/FS guidance, the data were compared with Screening Levels to confirm/refine the Potential Areas of Concern (PAOCs) identified based on review of historical Site data during completion of the PSE. For the purpose of this evaluation, the Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier I Soil Remediation Objectives (SROs) for commercial/industrial use were used as Screening Levels.⁶ The Screening Levels are listed in Tables IV-1 through IV-4. The Phase 1 laboratory data and data validation reports are submitted under separate cover.

Eleven (11) of the 26 soil samples contained metals concentrations above the Screening Levels. The concentrations of the metals detected above the Screening Levels, which included arsenic, cadmium and zinc, are shown on Figure IV-1. The exceedances of Screening Levels occurred at isolated locations within Area 1, Area 2, Area 3 and the Western Area. Zinc was detected above the Screening Level in only one sample (A1-6). The zinc concentration in this sample, 11,000 mg/kg, exceeded the Screening Level of 7,000 mg/kg, which is based on soil leaching to ground water. No VOCs, SVOCs or PCBs were detected in any of the soil samples at concentrations exceeding the respective Screening Levels.

The Screening Level for arsenic was slightly exceeded in three samples: A2-7, A2-19, and A3-19. The Screening Level that was exceeded at these three soil boring locations (11.3 mg/kg) represents average background conditions in non-metropolitan statistical areas (MSAs) of Illinois. Since the detected arsenic levels (12 mg/kg and 13 mg/kg) are very close to the non-MSA background value, which is the Screening Level for both residential and industrial/commercial land use, chemicals containing arsenic are not known to have been used at the Site, and arsenic was not detected in the leachate analyses of the residue piles (see discussion below).

⁶ The more conservative of the SROs for the ingestion/inhalation and soil-to-ground water pathways were used as the Screening Levels in the comparisons. The Screening Levels used for comparison, for those chemicals that exceeded a Screening Level, are shown on Figure IV-3.

Cadmium was detected above its Screening Level of 11mg/kg in nine samples, with concentrations ranging from 17 mg/kg to 87 mg/kg. Similar to zinc, the Screening Level for cadmium of 11 mg/kg is based on soil leaching to groundwater.

The XRF field screening data presented in Appendix C were used to further evaluate the spatial distribution of cadmium in soils. Because elevated XRF instrument detection limits prevented direct estimation of cadmium concentrations in many of the screening samples, the zinc/cadmium ratio from laboratory samples in which both metals were detected was used to estimate the cadmium concentrations at each screening location where direct estimation using XRF was not possible. The linear relationship between zinc and cadmium, which is plotted in Appendix E, indicates that a zinc concentration of 1,653 mg/kg would correspond to a cadmium concentration equal to the Screening Level of 11 mg/kg (for leaching of soil to ground water). Using the statistical “kriging” function provided by Environmental Visualization Software™ (EVS), the extent of zinc concentrations above this threshold are mapped out in Figure IV-2.⁷ On Figure IV-3, these areas are presented as an overlay on a map containing the soil boring locations and laboratory results exceeding the Screening Levels. As shown, the areas of Screening Level exceedances measured at the laboratory generally fall within the areas of cadmium exceedances predicted using EVS.

Based on these results, cadmium and zinc are designated as Potential Contaminants of Concern (PCOCs) for soil. As shown on Figure IV-3, the soil PAOCs are defined as those portions of Areas 1-4 and the Western Area that were characterized by soil samples exhibiting measured (laboratory quantified) and predicted (estimated from XRF data) concentrations of cadmium and zinc exceeding the Screening Levels. Actual ground water impacts, if any, will be measured during Phase 2 of the RI.

B. Sediment Investigation

The analytical results for the sediment samples are summarized in Tables IV-5 through IV-8. Similar to soils, TACO Soil Remediation Objectives were designated as Screening Levels for the purpose of confirming/refining PCOCs and PAOCs for sediment. Screening Levels corresponding to residential land use were used. Seven (7)

⁷ Kriging estimates constrained to sample areas.

of the 16 sediment samples collected for laboratory analysis contained one or more metal(s) above the Screening Levels. No VOC, SVOC, or PCB concentrations were detected in sediments above the respective Screening Levels in the Phase I investigation. Vinyl chloride was detected in sediment sample SD-WD-9D at a concentration of 13 ug/Kg, which slightly exceeds its Screening Level of 10 ug/Kg based on soil leaching to ground water. However, a duplicate sample collected at this location had a vinyl chloride concentration of 2.5 ug/Kg, which is below the Screening Level. In the eastern drainageway, zinc and cadmium were detected above the Screening Levels: zinc in sample SD-ED-16 at a concentration of 8,400 mg/kg; and zinc and cadmium in sample SD-ED-13 at concentrations of 11,000 mg/kg and 13 mg/kg, respectively. Only the highly conservative Screening Levels corresponding to leaching of soil to groundwater (7,500 mg/kg for zinc and 11 mg/kg for cadmium) were exceeded in these samples.

In the western drainageway, arsenic, antimony, cadmium, lead and zinc were detected above Screening Levels. Arsenic exceeded the Screening Level based on soil leaching to ground water of 11.3 mg/kg in samples SD-WD-7 and SD-WD-10.⁸ Antimony exceeded the Screening Level based on soil leaching to ground water of 5 mg/kg, which is in sample SD-WD-7. Cadmium exceeded the Screening Level based on soil leaching to ground water of 11 mg/kg in samples SD-WD-6, SD-WD-7, SD-WD-8, and SD-WD-9, and the Screening Level based on inhalation/ingestion (78 mg/kg) in samples SD-WD-7 and SD-WD-9. Lead exceeded the Screening Level based on inhalation/ingestion (400 mg/kg) in samples SD-WD-7 and SD-WD-8. Zinc exceeded the Screening Level based on soil leaching to ground water in samples SD-WD-6, SD-WD-7, and SD-WD-8 and SD-WD-9.

In summary, cadmium and zinc are considered PCOCs for sediment in the eastern drainageway, and antimony, arsenic, cadmium, lead, and zinc are considered PCOCs for sediment in the western drainageway. Based on these results, the portions of the eastern and western drainageways highlighted on Figure IV-4 are defined as PAOCs for sediments.

⁸ As discussed for soil, the Screening Level represents average soil background conditions in non-MSAs of Illinois. Sample SD-WD-10 was collected in a drainage sample and is not believed to have been impacted by the site based on low detected concentrations of zinc.

C. Residue Pile Investigation

The analytical results for the residue pile samples are summarized in Table IV-9.

Typically, detected SPLP results were one to three orders of magnitude less than detected TCLP results, or had “non-detect” results, reflecting the mildly acidic solution used for the SPLP extraction. Three of the 15 piles/groups of piles, (RR1-3, RR2-11 and MP1-1) had a TCLP lead concentration in excess of 5.0 mg/L. Pile RR1-3 had a TCLP lead concentration of 14 mg/L (SPLP lead of <0.01 mg/L); pile RR2-11 had a TCLP lead concentration of 6 mg/L (SPLP lead of <0.01 mg/L); and pile MP1-21 had a TCLP lead concentration of 83 mg/L (SPLP lead of 0.62 mg/L). The TCLP lead results above the RCRA hazardous waste threshold of 5.0 mg/L are depicted on Figure IV-5. No other metals had TCLP results in excess of their respective RCRA hazardous waste threshold values⁹.

Based on these results, TCLP lead has been identified as a PCOC for the residues and the piles designated RR1-3, RR2-11 and MP1-21 are identified as PAOCs for residues. As discussed below, additional sampling of these residue piles during the Phase 2 investigation is proposed to provide additional characterization.

D. Off-Site Air Deposition

Based on available data and information concerning the residue piles, air deposition does not appear to have impacted off-site areas. As discussed above, the prevailing wind direction is from the south and south-southwest. Therefore, any impact would be the greatest in the area immediately north or north-northeast of the areas used for residue storage. A previous investigation conducted by IEPA addressed this issue through the collection of off-site surficial soil samples. None of this data suggest that off-site migration of contaminants through wind deposition has occurred. Inspection of western and northern property boundaries during the Phase 1 field activities showed no evidence of deposited residues in these areas or in adjacent off-site areas.

The Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: *Stationary Point and Area Sources*, in section 13.2.4 states “As the aggregate pile weathers, however, potential for dust emissions is greatly reduced.” In fact, the half-

⁹ The residue piles with TCLP lead results above the RCRA threshold are not necessarily hazardous waste.

life of this erosion potential ranges between 1 and 4 minutes. Therefore, any air erosion of the piles would be limited to a very short time period immediately following emplacement and would not be expected to occur over a protracted period of time. In addition, any impacts resulting from air erosion of residue piles would be expected to be the greatest closest to the source. Since no on-site soil impacts in the Northern Area of investigation were identified in the Phase I investigation, and existing off-site data show no impacts, off-site air erosion of residue piles and subsequent deposition is not considered a viable contaminant transport pathway at the Eagle Zinc site.

V. MODIFIED SITE CONCEPTUAL MODEL

Based on an evaluation of pre-existing site data presented in the PSE Report, affected environmental media, potential Contaminants of Concern (PCOCs), potential Areas of Concern (PAOCs), and potential exposure routes were identified as a preliminary Site Conceptual Model (SCM). Based on the Phase 1 sampling data for soils, sediment and residues, the SCM has been modified as follows:

POTENTIAL CONTAMINANTS OF CONCERN (PCOCs)					
On-Site Soil	Sediment – Western Drainageway	Sediment – Eastern Drainageway	Residues	Ground Water ¹⁰	Surface Water ¹⁰
Analytical Fractions					
TAL-Metals	TAL-Metals	TAL-Metals	TCLP	TAL-Metals	TAL-Metals
Cadmium	Antimony	Antimony	TCLP-Lead	Cadmium	Chromium
Lead	Arsenic	Arsenic		Lead	Copper
Zinc	Beryllium	Beryllium		Manganese	Lead
	Cadmium	Cadmium		Zinc	Manganese
	Lead	Lead		Iron	Zinc
	Silver	Silver			Iron
	Thallium	Thallium			
	Zinc	Zinc			
	Organics	Organics		Other Inorganics	Other Inorganics
	Vinyl Chloride	Vinyl Chloride		Sulfate	Sulfate

As compared with the PCOC summary included in the RI/FS Work Plan, zinc was added as a PCOC for on-site soil, and vinyl chloride was added as a PCOC for sediments. No specific modifications to the PCOC summary included in the RI/FS Work Plan were made for residues, ground water or surface water.

Based on exceedances of Screening Levels, the PAOCs for on-Site soil, sediment and residues are depicted on Figures IV-1, IV-2 and IV-3 and are summarized as follows:

¹⁰ From prior site data; to be reassessed during Phase 2.

POTENTIAL AREAS OF CONCERN (PAOCs)				
On-site Soil	Sediment	Residues	Ground Water ¹⁰	Surface Water ¹⁰
Area 1; Area 2; Area 3; Area 4 Western Area	Western Drainageway; Eastern Drainageway	RR1 Stockpiles ; RR2 Stockpiles ; MP Stockpiles	SW Part of Site	Western Drainageway; Eastern Drainageway

As compared with the preliminary PAOC summary provided in the RI/FS Work Plan, for on-site soil, the Western Area was added as a PAOC. No specific modifications to the PAOC summary included in the RI/FS Work Plan were made for sediment, residues, ground water or surface water.

Based on a qualitative evaluation, the following potential on-Site and off-Site exposure routes have been identified:

POTENTIAL EXPOSURE ROUTES							
	On-Site Soil	Residues	On-Site Sediments	Off-Site Sediments	On-Site Ground Water	Off-Site Ground Water	Surface Water
Potentially Affected Population	Employee; Construction Worker; Tresspasser; Future Resident ¹¹ ; Ecological Receptors	Construction Worker; Employee; Trespasser; Ecological Receptors	Construction Worker; Employee; Trespasser; Future Resident ¹¹ ; Ecological Receptors	Resident; Ecological Receptors	Construction Worker; Future Resident ¹¹	Resident	Resident; Ecological Receptors
Exposure Route(s)	Ingestion/ Inhalation; Soil Leaching to Ground Water; Potential Ecological Impacts	Ingestion/ Inhalation	Ingestion/ Inhalation; Soil Leaching to Ground Water	Ingestion/ Inhalation; Soil Leaching to Ground Water; Potential Ecological Impacts	Ingestion	Incidental Residential Exposure	Secondary Residential Exposure; Potential Ecological Impacts

No specific modifications were made to the Potential Exposure Routes summary presented in the RI/FS Work Plan based on The Phase 1 RI data. Potential ecological receptors/impacts were added to the on-site soil and on-site sediments categories, and

¹¹ This Scenario is hypothetical, as residential development of the site is not permitted under current zoning ordinances.

Tresspasser was added to on-site soil as a potentially affected population. In addition, based on differing affected populations and exposure routes, a distinction was made between on-site and off-site sediments.

As discussed in the RI/FS Work Plan, the Site Conceptual Model will be modified and supplemented as necessary during the course of the RI/FS, as additional data are generated and evaluated.

VI. PHASE 2 SAMPLING PROGRAM

In October 2002, Eagle Zinc Company announced that all manufacturing operations will permanently cease and that the facility will close by the end of 2002. This announcement is not expected to affect the completion of the RI/FS. Any data collected as a result of the plant closure activities that is relevant to the RI/FS will be included in future RI summaries. These data, if collected, are not part of the RI/FS; as such, they will not necessarily conform with all protocol set forth in the RI/FS Work Plan.

A. Surface Water Samples

Proposed locations for the collection of surface water samples during the Phase 2 investigation are shown on Figure VI-1. As described in the RI/FS Work Plan, each surface water sample is co-located with a sediment sample located downstream of the site that exhibited elevated metals concentrations or that represents upstream samples, which have not been impacted by Site operations, for each of the two major drainageways. Based on these selection criteria, it is estimated that up to ten (10) surface water samples will be collected, three (3) from the eastern drainageway, five (5) from the western drainageway, and two (2) from the pond.¹² All surface water samples will be analyzed for TAL metals and sulfate. In addition, as shown on Figure VI-1, five (5) of the samples will be analyzed for TCL organic compounds and PCBs.

B. Ground Water Investigation

The RI/FS Work Plan contained a proposal for the installation of 20 temporary wells, 10 of which would be sampled for screening purposes, with the remaining 10 wells used as piezometers. The RI/FS Work Plan also proposed the installation of 10 additional permanent monitoring wells to be co-located with selected temporary wells. As the installation and sampling of 10 temporary wells, followed by the installation and sampling of 10 permanent wells at the same locations would be duplicative, ENVIRON

¹² Adjustments in the sample locations may be necessary based on field observations made at the time of sample collection.

and the Parties propose the following course of action to address ground water in the Phase 2 sampling program.

- Six (6) permanent piezometers and four (4) temporary piezometers will be installed, with ground water elevations determined as discussed in the RI/FS Work Plan. The proposed piezometer locations are shown on Figure VI-2. The piezometers will be installed as described in Appendix A of the RI/FS Work Plan, including geological logging of the borings during installation.
- Ten (10) additional permanent monitoring wells will be installed as described in the RI/FS Work Plan. Using the previously determined ground water flow pattern, the Phase 1 results, and the areal distribution requirements for the permanent monitoring wells contained in the PAOC, Figure VI-2 shows proposed locations for the permanent monitoring wells.¹³ These locations may be adjusted slightly based on the piezometric information obtained from the temporary piezometers and existing monitoring wells.
- Sampling of the newly installed and existing monitoring wells will proceed as discussed in the RI/FS Work Plan.
- A staff gauge will be installed in the southwest pond and surveyed to determine pond water levels during the Phase 2 investigation.

C. Collection of Additional Residue Data

The piles/pile groups designated as RR1-3, RR2-11 and MP1-21 will be further characterized by subdividing each pile/group into sections and collecting one gross composite sample from each section for laboratory analysis of TCLP lead. Based on volumetric estimates each pile will be divided into a number of equal sections. Eight (8) composite samples will be collected from pile RR2-11, two (2) composite samples will be collected from pile RR1-3, and between 2 and 4 composite samples will be collected

¹³ Slight adjustments to the aerial distribution noted in the RI/FS Work Plan made based on Phase 1 results.

from the MP piles.¹⁴ Each sections composite sample will be composed of at least three sample increments, collected either as depth composites or area composites.¹⁵ The results of the composite samples will be used to better define sections of the piles that exceed the TCLP RCRA hazardous waste threshold value for lead of 5.0 mg/L. Based on this additional sampling piles may be separated into separated section based on whether the new composite samples exceed the TCLP RCRA hazardous waste values.

D. Collection of Soil pH Data

To determine site-wide soil pH conditions, one soil sample will be collected for laboratory soil pH analysis from each of the 20 soil borings used for installation of the monitoring wells and piezometers. Each soil pH sample will be collected at a depth of one foot below the depth at which undisturbed native soil is encountered.

¹⁴ To be determined following additional estimation of the MP pile volumes.

¹⁵ Similar to the sampling procedure employed during the Phase 1 residue sampling program, the depth composites will be collected at three equally spaced depths within the pile by completing test trenches. Area composites, consisting of sample increments spaced equally across the section to be sampled, will be collected for lower, horizontally extensive piles.

T A B L E S

Table II-1: Soil Sampling Summary

(page 1 of 5)

Soil Area	Soil Boring	Residue Thickness (ft)	Soil Boring Depth (ft)	Max PID (ppm _v)	Sum of XRF Metals Concentrations for PCOCs (ppm _v) ¹	Lab Sample ID	Sample Depth Interval (ft)	Lab Analyses
A1	1	1	4	0	502			
A1	2	2	8	0	604.8			
A1	3	7	12	0	1040	S-A1-3-9	8-9	TAL Metals
A1	4	1.5	4	0	210.6			
A1	5	0.8	4	0	1739.2			
A1	6	8	12	0	9068.8	SA-A1-6-9	8-9	TAL Metals
								TAL Metals
								TCL VOCs/SVOCs
A1	7	1.5	4	0	4748.8	S-A1-7-3	2-3	PCBs
A1	8	1	4	0	1349.6			
A1	9	3	8	0	2379.2			
A1	10	2	4	0	979.2			
A1	11	1.5	4	0	1149.6			
A1	12	2	8	0	2388.8			
A1	13	0	4	0	1988.8			
A1	14	5	8	0	1520			
A1	15	9	12	0	2828.8			
A1	16	9	12	0	1449.6			
A1	17	5	8	0	3289.6			
A1	18	28	28	NA	NA			
A1	19	11.5	16	0	208.2			
A1	20	0	4	0	1480			
A1	21	20	24		2788.8			
A1	22	28	28	NA	NA			
								TAL Metals
								TCL VOCs/SVOCs
A1	23	6	8	0	6508.8	S-A1-23-7	6-7	PCBs
A1	24	10	12	0	4108.8	S-A1-24-10	9-10	TAL Metals
A1	25	0	4	0	831.2			

1. XRF screening of uppermost one foot interval of undisturbed native soil.

Samples S-A4-15-2D and S-NA-9-2D collected as field duplicates.

*: Designated as MS/MSD.

Table II-1: Soil Sampling Summary
 (page 2 of 5)

Soil Area	Soil Boring	Residue Thickness (ft)	Soil Boring Depth (ft)	Max PID (ppm _v)	Sum of XRF Metals Concentrations for PCOCs (ppm _v) ¹	Lab Sample ID	Sample Depth Interval (ft)	Lab Analyses
A2	1	6	8	0	294.2			
A2	2	2	4	0	842.4			
A2	3	1.5	4	0	513.2			
A2	4	4.2	8	0	164.2			
A2	5	3.5	8	0	0			
A2	6	0	4	0	222.2			
								TAL Metals TCL VOCs/SVOCs PCBs
A2	7	0.5	4	0	1814.7	S-A2-7-3*	2-3	
A2	8	5.5	8	0	155.9			
A2	9	0.2	4	0	409.2			
A2	10	0	4	0	1249.6			
A2	11	1	4	0	291.2			
A2	12	1	4	0	913.6			
A2	13	0.5	4	0	2200.4			
A2	14	4.5	8	0	812			
								TAL Metals TCL VOCs/SVOCs PCBs
A2	15	2	4	0	1629.6	S-A2-15-3	2-3	
A2	16	0.8	4	0	170.7			
A2	17	0	4	0	406			
A2	18	1	4	0	3308.8			
								TAL Metals TCL VOCs/SVOCs PCBs
A2	19	0.5	4	0	1629.6	S-A2-19-6	1-2	
A2	20	0.8	4	0	476			
A2	21	1.5	8	0	666			
A2	22	0	4	0	706			
A2	23	2	4	0	2939.2	S-A2-23-3	2-3	TAL Metals
A2	24	2	4	0	2432.1	S-A2-24-3	2-3	TAL Metals
A2	25	0	4	0	508			

1. XRF screening of uppermost one foot interval of undisturbed native soil.
 Samples S-A4-15-2D and S-NA-9-2D collected as field duplicates.

*: Designated as MS/MSD.

Table II-1: Soil Sampling Summary
 (page 3 of 5)

Soil Area	Soil Boring	Residue Thickness (ft)	Soil Boring Depth (ft)	Max PID (ppm _v)	Sum of XRF Metals Concentrations for PCOCs (ppm _v) ¹	Lab Sample ID	Sample Depth Interval (ft)	Lab Analyses
A3	1	1	4	0	417.6			
A3	2	0	4	0	319.4			
A3	3	3	8	0	843.2			
A3	4	1	4	0	3486			
A3	5	1.5	4	0	212.4			
A3	6	0	4	0	354.2			
A3	7	9	12	0	219.2			
A3	8	4	8	0	490.4			
A3	9	1	4	0	466.4			
A3	10	0	4	0	353.4			
A3	11	4	8	0	592			
A3	12	1.5	4	0	614			
A3	13	4.5	8	0	351.6			
A3	14	0	4	0	276.2			
A3	15	4	8	0	812.8			
A3	16	5	8	0	450			
A3	17	4	8	0	635.6			
A3	18	2	4	0	1009.6			
A3	19	4	8	0	1389.6	S-A3-19-5	4-5	TAL Metals
								TAL Metals
								TCL VOCs/SVOCs
A3	20	0	4	0	1160	S-A3-20-2	1-2	PCBs
A3	21	2	4	0	2419.2			
A3	22	5	8	0	3009.6	S-A3-22-6	5-6	TAL Metals
								TAL Metals
								TCL VOCs/SVOCs
A3	23	2	4	0	1200	S-A3-23-2*	1-2	PCBs
A3	24	1	4	0	1160			
								TAL Metals
								TCL VOCs/SVOCs
A3	25	1	4	0	1089.6	S-A3-25-2	1-2	PCBs

1. XRF screening of uppermost one foot interval of undisturbed native soil.
 Samples S-A4-15-2D and S-NA-9-2D collected as field duplicates.

*: Designated as MS/MSD.

Table II-1: Soil Sampling Summary
 (page 4 of 5)

Soil Area	Soil Boring	Residue Thickness (ft)	Soil Boring Depth (ft)	Max PID (ppm _v)	Sum of XRF Metals Concentrations for PCOCs (ppm _v) ¹	Lab Sample ID	Sample Depth Interval (ft)	Lab Analyses
A4	1	3	8	0	1389.6	S-A4-1-6	1-2	TAL Metals
A4	2	1.5	4	0	295.2			
A4	3	1	4	0	2320	S-A4-3-2	1-2	TAL Metals
A4	4	3	8	0	131.6			
A4	5	4	4	NA	NA			
A4	6	0.8	4	0	383.6			
A4	7	2	4	0	225			
A4	8	4	8	0	0			
A4	9	0	4	0	356.8			
A4	10	6	8	0	401.6			
A4	11	0	4	0	515.2			
A4	12	0.3 (0.5-0.8)	4	0	504.4			
A4	13	1.5	4	0	598			
A4	14	.	4	0	758.8			
								TAL Metals
A4	15	2	4	0	1480	S-A4-15-2/ S-A4-15-2D	1-2	TCL VOCs/SVOCs PCBs
A4	16	2	4	0	894.4			
A4	17	3	8	0	1329.6	S-A4-17-2	1-2	TAL Metals
A4	18	1.2	4	0	233.4			
A4	19	2	4	0	1140			
A4	20	4	8	0	567.2			
A4	21	1.5	4	0	1209.6			
								TAL Metals
A4	22	0	4	0	1920	S-A4-22-2	1-2	TCL VOCs/SVOCs PCBs
A4	23	1	4	0	554.4			
A4	24	0 (trace)	4	0	586.8			
A4	25	1	4	0	337.6			

1. XRF screening of uppermost one foot interval of undisturbed native soil.
 Samples S-A4-15-2D and S-NA-9-2D collected as field duplicates.

*: Designated as MS/MSD.

Table II-1: Soil Sampling Summary
(page 5 of 5)

Soil Area	Soil Boring	Residue Thickness (ft)	Soil Boring Depth (ft)	Max PID (ppm _v)	Sum of XRF Metals Concentrations for PCOCs (ppm _v) ¹	Lab Sample ID	Sample Depth Interval (ft)	Lab Analyses
MA	1	2	4	0	476			
MA	2	2	4	0	327			
MA	3	5	8	0	0			
MA	4	4	8	0	261.6			
MA	5	2	4	0	398			
MA	6	2.5	8	0	1739.2	S-MA-6-4	3-4	TAL Metals
MA	7	0	4	0	193.5			
MA	8	1	4	0	295	S-MA-8-2	1-2	TAL Metals TCL VOCs/SVOCs PCBs
MA	9	0.5	4	0	1500	S-MA-9-2	1-2	TAL Metals
MA	10	0	4	0	272.6			
WA	1	0	4	0	155.3			
WA	2	0	4	0	0			
WA	3	0	4	0	233.2			
WA	4	0	4	0	440			
WA	5	0	4	0	122.5			
WA	6	0	4	0	175			
WA	7	0	4	0	1309.6			
WA	8	0	4	0	1582.6	S-WA-8-2	1-2	TAL Metals TCL VOCs/SVOCs PCBs
WA	9	0	8	0	1319.3	S-WA-9-2	1-2	TAL Metals
WA	10	1.5	4	0	1020			
NA	1	0	4	0	223.8			
NA	2	0	4	0	0			
NA	3	0	4	0	207			
NA	4	0	4	0	416.4			
NA	5	0	4	0	196.8			
NA	6	0	4	0	122.9			
NA	7	0	4	0	289			
NA	8	0	4	0	1868.8	S-NA-8-2	1-2	TAL Metals
NA	9	0	4	0	584.4	S-NA-9-2/ S-NA-9-2D	1-2	TAL Metals TCL VOCs/SVOCs PCBs
NA	10	0	4	0	636			

1. XRF screening of uppermost one foot interval of undisturbed native soil.

Samples S-A4-15-2D and S-NA-9-2D collected as field duplicates.

*: Designated as MS/MSD.

Table II-2: Sediment Sampling Summary

Drainageway	Onsite/ Offsite	Lab Sample number	PID (ppm.)	Lab Analyses
Western	Offsite	SD-WD-1	0	TAL Metals
Western	Offsite	SD-WD-2	0	TAL Metals
Western	Offsite	SD-WD-3	0	TAL Metals
Western	Offsite	SD-WD-4	0	TAL Metals
Western	Offsite	SD-WD-5	0	TAL Metals
Western	Offsite	SD-WD-6	0	TAL Metals
Western	Offsite	SD-WD-7	0	TAL Metals TCL VOCs/SVOCs PCBs
Western	Offsite	SD-WD-8	0	TAL Metals
Western	Onsite	SD-WD-9/ SW-WD-9D	0	TAL Metals TCL VOCs/SVOCs PCBs
Western	Offsite	SD-WD-10	0	TAL Metals
Eastern	Offsite	SD-ED-11	0	TAL Metals
Eastern	Onsite	SD-ED-12*	0	TAL Metals TCL VOCs/SVOCs PCBs
Eastern	Offsite	SD-ED-13	0	TAL Metals TCL VOCs/SVOCs PCBs
Eastern	Offsite	SD-ED-14	0	TAL Metals
Eastern	Offsite	SD-ED-15	0	TAL Metals
Eastern	Offsite	SD-ED-16	0	TAL Metals

* Designated as MS/MSD
SW-WD-9D collected as a field duplicate

Table II-3: Residue Sampling Summary

Lab Sample Number	Residue Pile ID from RI/FS Workplan	Residue Type	Lab Analyses	Volume Estimates (cu.yds.)	Comments
R-RR1-1	1	RR1	TCLP/SPLP	1,400	--
R-RR1-2	2	RR1	TCLP/SPLP	2,300	--
R-RR1-3	3	RR1	TCLP/SPLP	1,100	--
R-RR1-4/R-RR1-4D	4	RR1	TCLP/SPLP	2,700	--
R-RCO-5	5	RCO	TCLP/SPLP	3,200	--
R-CPH-6	6	CPH	TCLP/SPLP	800	--
R-CPH-9	9	CPH	TCLP/SPLP	800	--
R-RCO-10	10	RCO	TCLP/SPLP	4,500	--
R-RR2-11*	11	RR2	TCLP/SPLP	8,000	--
R-RRO-12	12	RRO	TCLP/SPLP	11,600	--
R-NP-13	14,15,16	unk	TCLP/SPLP	400	These piles were grouped for sampling because of their small size, proximity and similar appearance.
R-NP-14	17,18,19,20	unk	TCLP/SPLP	500	These piles were grouped for sampling because of their small size, proximity and similar appearance.
R-NP-15	NI	MP	TCLP/SPLP	1,100	This pile was not identified in the RI/FS Work Plan. Based on its appearance this appears to be an older pile.
R-NP-16	NI	RRO	TCLP/SPLP	5,000	This pile was not identified in the RI/FS Work Plan. This is a newer pile which has accumulated as a result of on-site residue processing.
R-MP-21	21	MP	TCLP/SPLP	500	--

* Designated as MS/MSD

R-RR1-4D collected as a duplicate sample

NI = Residue pile not identified in RI/FS Workplan

RR1 = Rotary Residue Type 1

RR2 = Rotary Residue Type 2

RCO = Rotary Clean Out

RRO = Rotary Residue Oversized

CPH = Carbon Plant Hutch

MP = Miscellaneous Piles

unk = Unknown pile type

Table IV-1
Soil Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter		1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1,2-Trichlorotri-fluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Dibromoethene	1,2-Dibromo-3-chloropropene	1,2-Dibromoethane	1,2-Dibromoethene	1,2-Dichloroethane	1,2-Dichloropropane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	
Screening Levels ug/kg																		
Ingestion/ Inhalation Industrial/ Commercial		1,200,000	--	1,800,000	--	130,000	300,000	920,000	110	70	310,000	700	500	--	340,000	--	--	
Soil > GW		2,000	--	20	--	23,000	60	5,000	2	0.4	17,000	20	30	--	2,000	--	--	
Eagle Zinc Company Site Data (ug/kg)																		
FieldID	Matrix	Collection Date																
S-A1-7-3	SOIL	07/19/2002	1.3 U	1.4 U	1.2 U	1.6 U	1.4 U	1.6 U	1.4 U	1.6 U	1.2 U	1.6 U	1.4 U	1 U	1.1 U	1.5 U	2.1 R	1.8 U
S-A1-23-7	SOIL	07/19/2002	1.6 U	1.8 U	1.5 U	2 U	1.7 U	2 U	1.8 U	2.0 U	1.5 U	2 U	1.8 U	1.3 U	1.4 U	1.9 U	2.6 R	2.2 U
S-NA-9-2	SOIL	07/19/2002	1.1 U	1.1 U	0.95 U	1.3 U	1.1 U	1.3 U	1.1 U	1.3 U	0.96 U	1.3 U	1.2 U	0.85 U	0.93 U	1.2 U	1.7 R	1.4 U
S-NA-92D	SOIL	07/19/2002	1.1 U	1.2 U	0.97 U	1.3 U	1.1 U	1.3 U	1.2 U	1.3 U	0.98 U	1.3 U	1.2 U	0.86 U	0.94 U	1.3 U	1.7 R	1.5 U
S-MA-8-2	SOIL	07/19/2002	1.7 U	1.8 U	1.5 U	2.1 U	1.8 U	2.1 U	1.8 U	2.1 U	1.5 U	2 U	1.8 U	1.3 U	1.5 U	2 U	2.7 R	2.3 U
S-WA-8-2	SOIL	07/19/2002	1.7 U	1.8 U	1.5 U	2.1 U	1.8 U	2.1 U	1.8 U	2.1 U	1.5 U	2 U	1.8 U	1.3 U	1.5 U	2 U	8.1 J	2.3 U
MB1824233	SOIL	07/19/2002	0.81 U	0.87 U	0.73 U	1 U	0.86 U	1 U	0.88 U	1 U	0.74 U	0.99 U	0.89 U	0.65 U	0.71 U	0.95 U	1.3 U	1.1 U
MB2824233	SOIL	07/19/2002	0.81 U	0.87 U	0.73 U	1 U	0.86 U	1 U	0.88 U	1 U	0.74 U	0.99 U	0.89 U	0.65 U	0.71 U	0.95 U	1.3 U	1.1 U
A3-23-2	SOIL	07/19/2002	2 U	2.1 U	1.8 U	2.4 U	2.1 U	2.4 U	2.2 U	2.4 U	1.8 U	2.4 U	2.2 U	1.6 U	1.7 U	2.3 U	3.2 R	2.7 U
A3-20-2	SOIL	07/19/2002	1.6 U	1.7 U	1.4 U	1.9 U	1.7 U	1.9 U	1.7 U	1.9 U	1.4 U	1.9 U	1.7 U	1.3 U	1.4 U	1.8 U	2.5 R	2.1 U
A3-25-2	SOIL	07/19/2002	1.3 U	1.4 U	1.2 U	1.6 U	1.4 U	1.6 U	1.4 U	1.6 U	1.2 U	1.6 U	1.4 U	1 U	1.1 U	1.5 U	4.4 J	1.7 U
A2-19-4	SOIL	07/19/2002	1.5 U	1.6 U	1.3 U	1.8 U	1.6 U	1.8 U	1.6 U	1.8 U	1.4 U	1.8 U	1.6 U	1.2 U	1.3 U	1.7 U	2.4 R	2 U
A2-7-3	SOIL	07/19/2002	1.5 U	1.7 U	1.4 U	1.9 U	1.6 U	1.9 U	1.7 U	1.9 U	1.4 U	1.9 U	1.7 U	1.2 U	1.4 U	1.8 U	2.5 U	2.1 U
A2-15-3	SOIL	07/19/2002	1.3 U	1.4 U	1.2 U	1.6 U	1.4 U	1.6 U	1.4 U	1.6 U	1.2 U	1.6 U	1.4 U	1 U	1.1 U	1.5 U	2.1 U	1.7 U
A4-22-2	SOIL	07/19/2002	0.82 U	0.88 U	0.74 U	1 U	0.87 U	1 U	0.89 U	1 U	0.75 U	1 U	0.9 U	0.66 U	0.72 U	0.96 U	1.7 J	1.1 U
A4-15-2	SOIL	07/19/2002	0.9 U	0.97 U	0.82 U	1.1 U	0.96 U	1.1 U	0.98 U	1.1 U	0.83 U	1.1 U	0.99 U	0.73 U	0.79 U	1.1 U	1.5 U	1.2 U
A4-15-2D	SOIL	07/19/2002	0.9 U	0.97 U	0.81 U	1.1 U	0.96 U	1.1 U	0.98 U	1.1 U	0.83 U	1.1 U	0.99 U	0.73 U	0.79 U	1.1 U	1.5 U	1.2 U

* The more conservative Screening Level for m-xylene and p-xylene was used

** Total 1,3-DCP summed from tran and cis lab results

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control

N: Spiked sample not within control limits

Table V-1
Soil Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter		4-Methyl-2-pentanone	Acetone	Benzene	Bromo-dichloro-methane	Bromoform	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chloro-benzene	Chloro-dibromo-methane	Chloro-ethane	Chloroform	Chloro-methane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	trans-1,3-Dichloro-propene	
Screening Levels ug/kg																		
Ingestion/ Inhalation Industrial/ Commercial		--	100,000,000	1,600	92,000	100,000	--	9,000	640	1,300	1,300,000	--	540	--	1,200,000	--	--	
Soil -> GW		--	16,000	30	600	800	--	32,000	70	1,000	400	--	600	--	400	--	--	
Eagle Zinc Company Site Data (ug/kg)																		
FieldID	Matrix	Collection Date																
S-A1-7-3	SOIL	07/19/2002	1.1 U	4.3 R&	1.5 U	1.4 U	1.2 U	1.9 U	1.9 U	1.5 U	1.6 U	1.3 U	1.3 U	1.4 U	1.3 U	1.6 U	1.1 U	1 U
S-A1-23-7	SOIL	07/19/2002	1.4 U	5.4 R&	1.8 U	1.7 U	1.6 U	2.4 U	2.4 U	1.9 U	2 U	1.6 U	1.7 U	1.7 U	1.6 U	2 U	1.4 U	1.3 U
S-NA-9-2	SOIL	07/19/2002	0.93 U	3.5 R&	1.2 U	1.1 U	1 U	1.6 U	1.6 U	1.2 U	1.3 U	1 U	1.1 U	1.1 U	1 U	1.3 U	0.91 U	0.82 U
S-NA-92D	SOIL	07/19/2002	0.94 U	4.4 J&	1.2 U	1.1 U	1 U	1.6 U	1.6 U	1.2 U	1.3 U	1 U	1.1 U	1.1 U	1 U	1.3 U	0.93 U	0.84 U
S-MA-8-2	SOIL	07/19/2002	1.5 U	5.6 R&	1.9 U	1.8 U	1.6 U	2.5 U	2.5 U	1.9 U	2 U	1.6 U	1.7 U	1.8 U	1.6 U	2.1 U	1.4 U	1.3 U
S-WA-8-2	SOIL	07/19/2002	1.5 U	30 J&	1.9 U	1.7 U	1.6 U	2.5 U	2.5 U	1.9 U	2 U	1.6 U	1.7 U	1.7 U	1.6 U	2.1 U	1.4 U	1.3 U
MB1824233	SOIL	07/19/2002	0.71 U	2.7 R&	0.91 U	0.85 U	0.77 U	1.2 U	1.2 U	0.94 U	0.99 U	0.79 U	0.84 U	0.85 U	0.78 U	1 U	0.7 U	0.63 U
MB2824233	SOIL	07/19/2002	0.71 U	2.7 R&	0.91 U	0.85 U	0.77 U	1.2 U	1.2 U	0.94 U	0.99 U	0.79 U	0.84 U	0.85 U	0.78 U	1 U	0.7 U	0.63 U
A3-23-2	SOIL	07/19/2002	1.7 U	61 J&	2.2 U	2.1 U	1.9 U	2.9 U	2.9 U	2.3 U	2.4 U	1.9 U	2.1 U	2.1 U	1.9 U	2.4 U	1.7 U	1.5 U
A3-20-2	SOIL	07/19/2002	1.4 U	5.2 R&	1.8 U	1.6 U	1.5 U	2.3 U	2.3 U	1.8 U	1.9 U	1.5 U	1.6 U	1.6 U	1.5 U	1.9 U	1.4 U	1.2 U
A3-25-2	SOIL	07/19/2002	1.1 U	23 J&	1.4 U	1.4 U	1.2 U	1.9 U	1.9 U	1.5 U	1.6 U	1.3 U	1.3 U	1.4 U	1.2 U	1.6 U	1.1 U	1 U
A2-19-4	SOIL	07/19/2002	1.3 U	4.9 R&	1.7 U	1.6 U	1.4 U	2.2 U	2.2 U	1.7 U	1.8 U	1.4 U	1.5 U	1.6 U	1.4 U	1.8 U	1.3 U	1.2 U
A2-7-3	SOIL	07/19/2002	1.4 U	5.2 R&	1.7 U	1.6 U	1.5 U	2.3 U	2.3 U	1.8 U	1.9 U	1.5 U	1.6 U	1.6 U	1.5 U	1.9 U	1.3 U	1.2 U
A2-15-3	SOIL	07/19/2002	1.1 U	4.3 R&	1.4 U	1.3 U	1.2 U	1.9 U	1.9 U	1.5 U	1.6 U	1.3 U	1.3 U	1.3 U	1.2 U	1.6 U	1.1 U	1 U
A4-22-2	SOIL	07/19/2002	0.72 U	5.8 J&	0.92 U	0.86 U	0.78 U	1.2 U	1.2 U	0.95 U	1 U	0.8 U	0.85 U	0.86 U	0.79 U	1 U	0.71 U	0.64 U
A4-15-2	SOIL	07/19/2002	0.79 U	3 R&	1 U	0.95 U	0.86 U	1.3 U	1.3 U	1 U	1.1 U	0.88 U	0.94 U	0.95 U	0.87 U	1.1 U	0.78 U	0.7 U
A4-15-2D	SOIL	07/19/2002	0.79 U	3 R&	1 U	0.95 U	0.86 U	1.3 U	1.3 U	1 U	1.1 U	0.88 U	0.94 U	0.95 U	0.87 U	1.1 U	0.78 U	0.7 U

* The more conservative Screening Level for m-xylene and p-xylene was used

**Total 1,3-DCP summed from tran and cis lab results

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control

N: Spiked sample not within control limits

Table V-1
Soil Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter			1,3 DCP (total)**	Cyclo-hexane	Dichloro-difluoro-methane	Ethyl-benzene	Fluorotri-chloro-methane	Isopropyl-benzene	Methyl Acetate	Methyl-tert-butyl-ether	Methyl-cyclohexane	Methyl-ene chloride	Styrene	Tetrachloro ethene	Toluene	trans-1,2-Dichloroethene	Trichloro-ethene	Vinyl chloride																
<i>Screening Levels ug/kg</i>																																		
Ingestion/ Inhalation Industrial/ Commercial			390	--	--	58,000	--	--	--	--	--	24,000	430,000	20,000	42,000	3,100,000	8,900	1,100																
Soil -> GW			4	--	--	13,000	--	--	--	--	--	20	4,000	60	12,000	700	60	10																
<i>Eagle Zinc Company Site Data (ug/kg)</i>																																		
FieldID	Matrix	Collection Date																																
S-A1-7-3	SOIL	07/19/2002	2.1	U	4.2	U	1.1	U	1.4	U	1.8	U	1.3	U	4.5	U	1.5	U	4.3	U	3.1	J	1.3	U	1.8	U	1.6	U	1.3	U	1.6	U	1.4	U
S-A1-23-7	SOIL	07/19/2002	2.7	U	5.2	U	1.4	U	1.7	U	2.2	U	1.6	U	5.6	U	1.9	U	5.4	U	3.9	J	1.6	U	2.2	U	2	U	1.7	U	2	U	1.8	U
S-NA-9-2	SOIL	07/19/2002	1.73	U	3.4	U	0.93	U	1.1	U	1.4	U	1	U	3.6	U	1.2	U	3.5	U	2.5	J	1	U	1.4	U	1.3	U	1.1	U	1.3	U	1.2	U
S-NA-92D	SOIL	07/19/2002	1.77	U	3.5	U	0.94	U	1.1	U	1.5	U	1	U	3.7	U	1.2	U	3.6	U	3.2	J	1.1	U	1.5	U	1.3	U	1.1	U	1.3	U	1.2	U
S-MA-8-2	SOIL	07/19/2002	2.7	U	5.4	U	1.5	U	1.8	U	2.3	U	1.6	U	5.8	U	1.9	U	5.6	U	3.8	J	1.7	U	2.3	U	2	U	1.7	U	2.1	U	1.8	U
S-WA-8-2	SOIL	07/19/2002	2.7	U	5.3	U	1.5	U	1.8	U	2.3	U	1.6	U	5.8	U	1.9	U	5.5	U	4.7	J	1.6	U	2.3	U	2	U	1.7	U	2.1	U	1.8	U
MB1824233	SOIL	07/19/2002	1.33	U	2.6	U	0.71	U	0.86	U	1.1	U	0.79	U	2.8	U	0.93	U	2.7	U	0.9	U	0.8	U	1.1	U	0.97	U	0.83	U	1	U	0.89	U
MB2824233	SOIL	07/19/2002	1.33	U	2.6	U	0.71	U	0.86	U	1.1	U	0.79	U	2.8	U	0.93	U	2.7	U	0.9	U	0.8	U	1.1	U	0.97	U	0.83	U	1	U	0.89	U
A3-23-2	SOIL	07/19/2002	3.2	U	6.4	U	1.7	U	2.1	U	2.7	U	1.9	U	6.9	U	2.3	U	6.6	U	6.7	J	2	U	2.7	U	2.4	U	2	U	2.4	U	2.2	U
A3-20-2	SOIL	07/19/2002	2.6	U	5	U	1.4	U	1.7	U	2.1	U	1.5	U	5.4	U	1.8	U	5.2	U	9.3	J	1.5	U	2.1	U	1.9	U	1.6	U	1.9	U	1.7	U
A3-25-2	SOIL	07/19/2002	2.1	U	4.1	U	1.1	U	1.4	U	1.7	U	1.3	U	4.5	U	1.5	U	4.3	U	1.6	J	1.3	U	1.7	U	1.5	U	1.3	U	1.6	U	1.4	U
A2-19-4	SOIL	07/19/2002	2.5	U	4.8	U	1.3	U	1.6	U	2	U	1.4	U	5.1	U	1.7	U	4.9	U	3.8	J	1.5	U	2	U	1.8	U	1.5	U	1.8	U	1.6	U
A2-7-3	SOIL	07/19/2002	2.5	U	5	U	1.4	U	1.6	U	2.1	U	1.5	U	5.3	U	1.8	U	5.2	U	3.6	J	1.5	U	2.1	U	1.9	U	1.6	U	1.9	U	1.7	U
A2-15-3	SOIL	07/19/2002	2.1	U	4.1	U	1.1	U	1.4	U	1.7	U	1.3	U	4.4	U	1.5	U	4.3	U	2.9	J	1.3	U	1.7	U	1.5	U	1.3	U	1.6	U	1.4	U
A4-22-2	SOIL	07/19/2002	1.35	U	2.6	U	0.72	U	0.87	U	1.1	U	0.8	U	2.8	U	0.94	U	2.7	U	0.91	U	0.81	U	1.1	U	0.98	U	0.84	U	1	U	0.9	U
A4-15-2	SOIL	07/19/2002	1.48	U	2.9	U	0.79	U	0.96	U	1.2	U	0.88	U	3.1	U	1	U	3	U	1	U	0.89	U	1.2	U	1.1	U	0.93	U	1.1	U	0.99	U
A4-15-2D	SOIL	07/19/2002	1.48	U	2.9	U	0.79	U	0.96	U	1.2	U	0.88	U	3.1	U	1	U	3	U	1	U	0.89	U	1.2	U	1.1	U	0.93	U	1.1	U	0.99	U

* The more conservative Screening Level for m-xylene and p-xylene was used

**Total 1,3-DCP summed from tran and cis lab results

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: Indicates undetected at concentration

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits

~: Duplicate analyses not within control

N: Spiked sample not within control limits

Table IV-2
Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,2'-oxy-bis-(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene
Screening Levels ug/kg												
Ingestion/Inhalation Industrial/Commercial	920,000	310,000	--	340,000	--	200,000,000	390,000	610,000	41,000,000	410,000	8,400	8,400
Soil -> GW	5,000	17,000	--	2,000	--	270,000	200	1,000	9,000	200	0.8	0.7
Eagle Zinc Company Site Data in ug/Kg												
Field ID	Matrix	Collection Date										
S-A1-7-3	SOIL	07/19/2002	120 U	110 U	120 U	110 U	84 U	120 U	77 U	120 U	170 U	160 U
S-A1-23-7	SOIL	07/19/2002	110 U	100 U	110 U	100 U	78 U	110 U	72 U	110 U	160 U	150 U
S-NA-9-2	SOIL	07/19/2002	110 U	110 U	110 U	110 U	81 U	110 U	75 U	110 U	160 U	160 U
S-NA-92D	SOIL	07/19/2002	110 U	110 U	110 U	110 U	82 U	110 U	76 U	110 U	160 U	160 U
S-MA-8-2	SOIL	07/19/2002	140 U	130 U	140 U	130 U	100 U	140 U	93 U	140 U	200 U	190 U
S-WA-8-2	SOIL	07/19/2002	120 U	110 U	120 U	110 U	86 U	120 U	79 U	120 U	170 U	170 U
MB1824233	SOIL	07/19/2002	90 U	85 U	90 U	85 U	65 U	90 U	60 U	90 U	130 U	130 U
A3-23-2	SOIL	07/19/2002	110 U	100 U	110 U	100 U	78 U	110 U	72 U	110 U	160 U	150 U
A3-20-2	SOIL	07/19/2002	110 U	100 U	110 U	100 U	80 U	110 U	74 U	110 U	160 U	150 U
A3-25-2	SOIL	07/19/2002	110 U	100 U	110 U	100 U	80 U	110 U	74 U	110 U	160 U	150 U
A2-19-4	SOIL	07/19/2002	110 U	110 U	110 U	110 U	81 U	110 U	75 U	110 U	160 U	160 U
A2-7-3	SOIL	07/19/2002	120 U	110 U	120 U	110 U	85 U	120 U	78 U	120 U	170 U	160 U
A2-15-3	SOIL	07/19/2002	120 U	110 U	120 U	110 U	84 U	120 U	77 U	120 U	170 U	160 U
A4-22-2	SOIL	07/19/2002	120 U	110 U	120 U	110 U	83 U	120 U	77 U	120 U	170 U	160 U
A4-15-2	SOIL	07/19/2002	110 U	110 U	110 U	110 U	81 U	110 U	75 U	110 U	160 U	160 U
A4-15-2D	SOIL	07/19/2002	120 U	110 U	120 U	110 U	83 U	120 U	77 U	120 U	170 U	170 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Tab. A-2

Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	2-Chloro-naphthalene	2-Chloro-phenol	2-Methyl-naphthalene	2-Methyl-phenol	2-Nitro-aniline	2-Nitro-phenol	3,3-Dichlorobenzidine	3-Nitro-aniline	4,6-Dinitro-2-methyl-phenol	4-Bromo-phenyl phenyl ether	4-Chloro-3-methyl-phenol	4-Chloro-aniline	4-Chlorophenyl phenyl ether
Screening Levels ug/kg													
Ingestion/-Inhalation Industrial/ Commercial	--	--	--	100,000,000	--	--	13,000	--	--	--	--	820,000	--
Soil -> GW	--	--	--	15,000	--	--	7	--	--	--	--	700	--
Eagle Zinc Company Site Data in ug/Kg													
Field ID	Matrix	Collection Date											
S-A1-7-3	SOIL	07/19/2002	90 U	100 U	100 U	120 U	170 U	97 U	170 U&	65 U	140 U	77 U	140 U
S-A1-23-7	SOIL	07/19/2002	84 U	96 U	96 U	110 U	160 U	90 U	160 U&	60 U	130 U	72 U	130 U
S-NA-9-2	SOIL	07/19/2002	87 U	100 U	100 U	110 U	160 U	94 U	180 U&	62 U	130 U	75 U	130 U
S-NA-92D	SOIL	07/19/2002	88 U	100 U	100 U	110 U	160 U	95 U	160 U&	63 U	130 U	76 U	130 U
S-MA-8-2	SOIL	07/19/2002	110 U	120 U	120 U	140 U	200 U	120 U	200 U&	77 U	160 U	93 U	160 U
S-WA-8-2	SOIL	07/19/2002	93 U	110 U	110 U	120 U	170 U	99 U	170 U&	66 U	140 U	79 U	140 U
MB1824233	SOIL	07/19/2002	70 U	80 U	80 U	90 U	130 U	75 U	130 U&	50 U	110 U	60 U	110 U
A3-23-2	SOIL	07/19/2002	84 UN	96 U	96 U	110 U	160 U	90 U	160 U&N	60 UN	130 U	72 UN	130 U
A3-20-2	SOIL	07/19/2002	86 U	99 U	99 U	110 U	160 U	92 U	160 U&	62 U	130 U	74 U	130 U
A3-25-2	SOIL	07/19/2002	86 U	99 U	99 U	110 U	160 U	92 U	180 U&	62 U	130 U	74 U	130 U
A2-19-4	SOIL	07/19/2002	87 U	99 U	99 U	110 U	160 U	93 U	160 U&	62 U	130 U	75 U	130 U
A2-7-3	SOIL	07/19/2002	91 U	100 U	100 U	120 U	170 U	98 U	170 U&	65 U	140 U	78 U	140 U
A2-15-3	SOIL	07/19/2002	90 U	100 U	100 U	120 U	170 U	97 U	170 U&	64 U	140 U	77 U	140 U
A4-22-2	SOIL	07/19/2002	90 U	100 U	100 U	120 U	170 U	96 U	170 U&	64 U	130 U	77 U	130 U
A4-15-2	SOIL	07/19/2002	88 U	100 U	100 U	110 U	160 U	94 U	160 U&	63 U	130 U	75 U	130 U
A4-15-2D	SOIL	07/19/2002	90 U	100 U	100 U	120 U	170 U	96 U	170 U&	64 U	130 U	77 U	130 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table 2
Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	4-Methyl-phenol	4-Nitro-aniline	4-Nitro-phenol	Acena-phthene	Acena-phtylene	Acetophenone	Antha-cene	Atrazine	Benz-alde-hyde	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(a)-pyrene	Benzo(g,h,i)-perylene
Screening Levels ug/kg													
Ingestion/Inhalation Industrial/ Commercial	--	--	--	120,000,000	--	--	610,000,000	7,100,000	--	8,000	800	8,000	--
Soil -> GW	--	--	--	570,000	--	--	12,000,000	66	--	2,000	8,000	5,000	--
Eagle Zinc Company Site Data in ug/Kg													
Field ID	Matrix	Collection Date											
S-A1-7-3	SOIL	07/19/2002	100 U	310 U	300 U	110 U	97 U	120 U	84 U	77 U	90 U	120 U	97 U
S-A1-23-7	SOIL	07/19/2002	96 U	290 U	280 U	100 U	90 U	110 U	78 U	72 U	84 U	110 U	90 U
S-NA-9-2	SOIL	07/19/2002	100 U	300 U	290 U	110 U	94 U	110 U	81 U	75 U	87 U	110 U	94 U
S-NA-92D	SOIL	07/19/2002	100 U	300 U	300 U	110 U	95 U	110 U	82 U	76 U	88 U	110 U	95 U
S-MA-8-2	SOIL	07/19/2002	120 U	370 U	360 U	130 U	120 U	140 U	100 U	93 U	110 U	140 U	120 U
S-WA-8-2	SOIL	07/19/2002	110 U	320 U	310 U	110 U	99 U	120 U	86 U	79 U	93 U	120 U	99 U
MB1824233	SOIL	07/19/2002	80 U	240 U	240 U	85 U	75 U	90 U	65 U	60 U	70 U	90 U	75 U
A3-23-2	SOIL	07/19/2002	96 U	290 U	280 U	100 UN	90 UN	110 U	78 UN	72 U	84 U	110 U	90 U
A3-20-2	SOIL	07/19/2002	99 U	300 U	290 U	100 U	92 U	110 U	80 U	74 U	86 U	110 U	92 U
A3-25-2	SOIL	07/19/2002	99 U	300 U	290 U	100 U	92 U	110 U	80 U	74 U	86 U	110 U	92 U
A2-19-4	SOIL	07/19/2002	99 U	300 U	290 U	110 U	93 U	110 U	81 U	75 U	87 U	110 U	93 U
A2-7-3	SOIL	07/19/2002	100 U	310 U	310 U	110 U	98 U	120 U	85 U	78 U	91 U	120 U	98 U
A2-15-3	SOIL	07/19/2002	100 U	310 U	300 U	110 U	97 U	120 U	84 U	77 U	90 U	120 U	97 U
A4-22-2	SOIL	07/19/2002	100 U	310 U	300 U	110 U	96 U	120 U	83 U	77 U	90 U	120 U	96 U
A4-15-2	SOIL	07/19/2002	100 U	300 U	290 U	110 U	94 U	110 U	81 U	75 U	88 U	110 U	94 U
A4-15-2D	SOIL	07/19/2002	100 U	310 U	300 U	110 U	96 U	120 U	83 U	77 U	90 U	120 U	96 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Benzo-(k)-fluoranthene	Biphenyl	bis-(2-Chloroethoxy)methane	bis-(2-Chloroethyl)ether	bis(2-Ethylhexyl)phthalate	Butyl-benzyl-phthalate	Caprolactam	Carbazole	Chrysene	Di-n-butyl-phthalate	Di-n-octyl-phthalate	Dibenzo-(a,h)anthracene		
Screening Levels ug/kg														
Ingestion/Inhalation Industrial/ Commercial	78,000	--	--	47,000	410,000	930,000	--	290,000	780,000	2,300,000	10,000,000	800		
Soil -> GW	49,000	--	--		3,600,000	930,000	--	600	160,000	2,300,000	10,000,000	2,000		
Eagle Zinc Company Site Data in ug/Kg														
Field ID	Matrix	Collection Date												
S-A1-7-3	SOIL	07/19/2002	130 U	100 U	97 U	90 U	100 U	100 U	97 U	200 U	140 U	100 U	140 U	77 U&
S-A1-23-7	SOIL	07/19/2002	120 U	96 U	90 U	84 U	96 U	96 U	90 U	190 U	130 U	96 U	130 U	72 U&
S-NA-9-2	SOIL	07/19/2002	120 U	100 U	94 U	87 U	100 U	100 U	94 U	190 U	130 U	100 U	130 U	75 U&
S-NA-92D	SOIL	07/19/2002	130 U	100 U	95 U	88 U	100 U	100 U	95 U	200 U	130 U	100 U	130 U	76 U&
S-MA-8-2	SOIL	07/19/2002	150 U	120 U	120 U	110 U	120 U	120 U	120 U	240 U	160 U	120 U	160 U	93 U&
S-WA-8-2	SOIL	07/19/2002	130 U	110 U	99 U	93 U	110 U	110 U	99 U	210 U	140 U	110 U	140 U	79 U&
MB1824233	SOIL	07/19/2002	100 U	80 U	75 U	70 U	80 U	80 U	75 U	160 U	110 U	80 U	110 U	60 U&
A3-23-2	SOIL	07/19/2002	120 U	96 U	90 U	84 U	96 U	96 U	90 U	190 UN	130 UN	96 UN	130 U	72 U&N
A3-20-2	SOIL	07/19/2002	120 U	99 U	92 U	86 U	99 U	99 U	92 U	190 U	130 U	99 U	130 U	74 U&
A3-25-2	SOIL	07/19/2002	120 U	99 U	92 U	86 U	99 U	99 U	92 U	190 U	130 U	99 U	130 U	74 U&
A2-19-4	SOIL	07/19/2002	120 U	99 U	93 U	87 U	99 U	99 U	93 U	190 U	130 U	99 U	130 U	75 U&
A2-7-3	SOIL	07/19/2002	130 U	100 U	98 U	91 U	100 U	100 U	98 U	200 U	140 U	100 U	140 U	78 U&
A2-15-3	SOIL	07/19/2002	130 U	100 U	97 U	90 U	100 U	100 U	97 U	200 U	140 U	100 U	140 U	77 U&
A4-22-2	SOIL	07/19/2002	130 U	100 U	96 U	90 U	100 U	100 U	96 U	200 U	130 U	100 U	130 U	77 U&
A4-15-2	SOIL	07/19/2002	130 U	100 U	94 U	88 U	100 U	100 U	94 U	190 U	130 U	100 U	130 U	75 U&
A4-15-2D	SOIL	07/19/2002	130 U	100 U	96 U	90 U	100 U	100 U	96 U	200 U	130 U	100 U	130 U	77 U&

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL.

Parameter	Dibenzofuran	Diethyl-phthalate	Di-methyl-phthalate	Fluoran-thene	Fluorene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-cyclopenta-diene	Hexa-chloro-ethane	Indeno-(1,2,3-cd)-pyrene	Isophorone	N-Nitroso-di-n-propylamine
Screening Levels ug/kg												
Ingestion/Inhalation Industrial/ Commercial	--	2,000,000	--	82,000,000	82,000,000	1,800	--	1,100	2,000,000	8,000	4,600,000	800
Soil -> GW	--	470,000	--	4,300,000	560,000	2,000	--	400,000	500	14,000	8,000	0.05
Eagle Zinc Company Site Data in ug/Kg												
Field ID	Matrix	Collection Date										
S-A1-7-3	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	65 U	120 U	77 U&	110 U	97 U
S-A1-23-7	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	60 U	110 U	72 U&	100 U	90 U
S-NA-9-2	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	62 U	110 U	75 U&	110 U	94 U
S-NA-92D	SOIL	07/19/2002	130 U	130 U	110 U	150 U	130 U	63 U	110 U	76 U&	110 U	95 U
S-MA-8-2	SOIL	07/19/2002	150 U	150 U	140 U	180 U	150 U	77 U	140 U	93 U&	130 U	120 U
S-WA-8-2	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	66 U	120 U	79 U&	110 U	99 U
MB1824233	SOIL	07/19/2002	100 U	100 U	90 U	110 U	100 U	50 U	90 U	60 U&	85 U	75 U
A3-23-2	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	60 U	110 UN	72 U&N	100 UN	90 U
A3-20-2	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	62 U	110 U	74 U&	100 U	92 U
A3-25-2	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	62 U	110 U	74 U&	100 U	92 U
A2-19-4	SOIL	07/19/2002	120 U	120 U	110 U	140 U	120 U	62 U	110 U	75 U&	110 U	93 U
A2-7-3	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	65 U	120 U	78 U&	110 U	98 U
A2-15-3	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	64 U	120 U	77 U&	110 U	97 U
A4-22-2	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	64 U	120 U	77 U&	110 U	96 U
A4-15-2	SOIL	07/19/2002	130 U	130 U	110 U	140 U	130 U	63 U	110 U	75 U&	110 U	94 U
A4-15-2D	SOIL	07/19/2002	130 U	130 U	120 U	150 U	130 U	64 U	120 U	77 U&	110 U	96 U
											77 U&	77 U&
												83 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table V-2
Soil Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	N-Nitrosodiphenylamine	Naphthalene	Nitrobenzene	Penta-chlorophenol	Phenanthrene	Phenol	Pyrene
Screening Levels ug/kg							
Ingestion/-Inhalation Industrial/ Commercial	1,200,000	1,800	9,400	--	--	120,000,000	61,000,000
Soil -> GW	1,000	12,000	100	--	--	100,000	4,200,000
Eagle Zinc Company Site Data in ug/Kg							
Field ID	Matrix	Collection Date					
S-A1-7-3	SOIL	07/19/2002	110 U	110 U	110 U	140 U	84 U
S-A1-23-7	SOIL	07/19/2002	100 U	100 U	100 U	130 U	78 U
S-NA-9-2	SOIL	07/19/2002	110 U	110 U	110 U	130 U	81 U
S-NA-92D	SOIL	07/19/2002	110 U	110 U	110 U	130 U	82 U
S-MA-8-2	SOIL	07/19/2002	130 U	130 U	130 U	160 U	100 U
S-WA-8-2	SOIL	07/19/2002	110 U	110 U	110 U	140 U	86 U
MB1824233	SOIL	07/19/2002	85 U	85 U	85 U	110 U	65 U
A3-23-2	SOIL	07/19/2002	100 U	100 U	100 U	130 U	78 U
A3-20-2	SOIL	07/19/2002	100 U	100 U	100 U	130 U	80 U
A3-25-2	SOIL	07/19/2002	100 U	100 U	100 U	130 U	80 U
A2-19-4	SOIL	07/19/2002	110 U	110 U	110 U	130 U	81 U
A2-7-3	SOIL	07/19/2002	110 U	110 U	110 U	140 U	85 U
A2-15-3	SOIL	07/19/2002	110 U	110 U	110 U	140 U	84 U
A4-22-2	SOIL	07/19/2002	110 U	110 U	110 U	130 U	83 U
A4-15-2	SOIL	07/19/2002	110 U	110 U	110 U	130 U	81 U
A4-15-2D	SOIL	07/19/2002	110 U	110 U	110 U	130 U	83 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level
U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-3
Soil Sample Results
PCBs
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Screening Levels ug/kg							
Ingestion/ Inhalation Industrial/ Commercial Soil -> GW	1,000	1,000	1,000	1,000	1,000	1,000	1,000
--	--	--	--	--	--	--	--
Eagle Zinc Company Site Data (ug/kg)							
Field ID	Matrix	Collection Date					
S-A1-7-3	SOIL	07/19/2002	17 U				
S-A1-23-7	SOIL	07/19/2002	16 U				
S-NA-9-2	SOIL	07/19/2002	16 U				
S-NA-92D	SOIL	07/19/2002	16 U				
S-MA-8-2	SOIL	07/19/2002	20 U				
S-WA-8-2	SOIL	07/19/2002	17 U				
A3-23-2	SOIL	07/19/2002	16 U*	16 U	16 U	16 U	16 U
A3-20-2	SOIL	07/19/2002	16 U				
A3-25-2	SOIL	07/19/2002	16 U				
A2-19-4	SOIL	07/19/2002	16 U				
A2-7-3	SOIL	07/19/2002	17 U				
A2-15-3	SOIL	07/19/2002	17 U				
A4-22-2	SOIL	07/19/2002	17 U				
A4-15-2	SOIL	07/19/2002	16 U				
A4-15-2D	SOIL	07/19/2002	17 U				

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within

*: Duplicate analyses not within control

N: Spiked sample not within control

Soil Sample Results, Metals
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium									
Screening Levels mg/kg																													
Ingestion-/Inhalation Industrial/Commercial	--	82	11.3	14,000	410	200	--	420	12,000	8,200	--	400	--	8,700	61	4,100	--	1,000	1,000	--									
Soil -> GW	--	5	29	1,700	140	11	--	--	--	200,000	--	--	--	--	3.3	180	--	5	13	--									
Eagle Zinc Company Site Data (mg/kg)																													
Collection Date																													
Field ID	Matrix																												
S-A1-6-9	SOIL	07/15/2002	8300	0.33	U	1.9	46	0.82	87	36000	12	7.1	9.1	10000	8.2	22000	400	0.0088	19	1800	J	0.28	U	0.067	U	61			
S-A1-23-7	SOIL	07/16/2002	14000	0.41	U	6.1	50	0.87	56	19000	20	6.4	14	18000	8.9	12000	200	0.013	21	2300	J	0.3	U	0.081	U	39			
S-A1-7-3	SOIL	07/16/2002	17000	0.71	U	4.3	100	1.1	44	1100	21	4.4	14	14000	22	2000	120	0.028	12	1400	J	0.58	U	0.14	U	33			
S-A1-24-10	SOIL	07/16/2002	12000	0.77	U	5.1	66	0.79	6.1	1600	16	4.5	16	16000	19	1800	180	0.0051	U	11	1900	J	1.7	J	0.15	U	69		
S-A1-3-9	SOIL	07/15/2002	15000	0.34	3.7	66	0.78	5.6	2200	20	3.9	11	15000	9.1	3000	98	0.0047	U	16	1900	J	0.27	U	0.067	U	42			
S-MA-6-4	SOIL	07/17/2002	26000	0.96		11	160	1.3	2	2500	30	4.4	23	29000	12	4300	240	0.03	21	2100	J	0.27	U	0.086	U	220			
S-MA-9-2	SOIL	07/17/2002	24000	2	U	7.2	220	1.3	8.2	2100	33	12	21	27000	10	3900	550	0.022	23	2100	J	1.5	U	0.4	U	110			
S-NA-8-2	SOIL	07/17/2002	26000	0.66		4	65	1.1	0.12	3200	27	4	11	15000	12	2600	38	0.022	15	1300	J	0.33	U	0.078	U	270			
S-NA9-2D	SOIL	07/17/2002	29000	0.81	U	5	280	1.1	0.55	2200	32	9	23	23000	13	4300	230	0.056	20	1700	J	0.62	U	0.16	U	130			
S-WA-8-2	SOIL	07/17/2002	9500	0.66		6.4	130	0.61	25	1600	12	7.7	18	47000	100	1300	580	0.038	8.6	860	J	0.31	U	0.094	120				
S-WA-9-2	SOIL	07/17/2002	14000	0.43	U	2.3	140	0.69	70	970	16	2.1	17	9100	48	1500	120	0.27	8.8	1200	J	0.3	U	0.087	U	26			
S-NA9-2	SOIL	07/17/2002	26000	0.42		6.3	260	1.4	0.83	1700	30	6.4	24	26000	12	3800	170	0.043	21	1700	J	0.28	U	0.074	U	100			
A2-19-6	SOIL	07/18/2002	23000	1.9	12	140	1.2	3.8	530	27	6.7	17	26000	18	3000	540	0.031	16	1600	J	0.35	U	0.42	28					
A2-23-3	SOIL	07/18/2002	23000	0.45	U	4.2	99	0.96	4.2	840	27	3.4	15	19000	11	2100	87	0.036	13	1300	J	0.32	U	0.09	U	30			
A2-24-3	SOIL	07/18/2002	21000	0.47		4.1	76	0.94	13	620	25	3.5	11	16000	7.4	1800	140	0.023	13	1200	J	0.3	U	0.071	U	20			
A2-7-3	SOIL	07/18/2002	29000	0.9	12	210	1.5	1.6	1300	32	9.5	23	31000	23	3800	610	0.025	24	2400	J	0.33	U	0.089	U	81				
A2-15-3	SOIL	07/18/2002	27000	0.46		3.9	110	1.1	6.8	1200	28	4	35	21000	23	2900	82	0.019	17	1800	J	0.31	U	0.084	U	26			
A3-23-2	SOIL	07/19/2002	28000	0.72		4.8	120	1.1	7.9	1500	30	3.7	15	22000	10	2400	68	0.039	15	1700	J	0.29	U	0.079	U	34			
A3-20-2	SOIL	07/19/2002	30000	2	U	8.3	140	1	6.3	1500	34	5.2	21	29000	11	4300	350	0.021	20	2200	J	1.4	U	0.4	U	71			
A3-25-2	SOIL	07/18/2002	23000	0.73	U	8.2	220	1.2	33	2500	29	4.7	19	25000	12	3700	410	0.043	21	2600	J	0.57	U	0.15	U	280			
S-A4-22-2	SOIL	07/19/2002	18000	0.62		8.4	170	0.85	1.3	1500	20	9.7	12	19000	21	2200	420	J	0.0051	U	12	J	1300	J	0.79	U	0.074	U	83
S-A4-15-2	SOIL	07/19/2002	25000	0.83	U	11	490	2.5	1	3300	33	29	24	29000	20	4100	1900	J	0.039	93	J	1700	J	1.7	U	0.17	U	350	
S-A4-15-2D	SOIL	07/19/2002	28000	0.93	U	13	290	2.8	0.51	3200	38	6.7	24	35000	14	4400	360	J	0.035	35	J	2100	J	1.8	U	0.19	U	390	
S-A4-4-2	SOIL	07/19/2002	33000	0.38	U	3.3	120	1.9	1.5	2800	35	5.3	17	16000	13	3300	100	J	0.031	19	J	1500	J	1.7		0.075	U	210	
S-A4-17-2	SOIL	07/19/2002	18000	0.71		9.3	120	1.5	1.2	1300	24	4.7	11	24000	28	2000	920	J	0.019	13	J	1300	J	1.5	U	0.075	U	63	
S-A3-22-6	SOIL	07/19/2002	18000	0.66		6.8	110	0.79	21	1100	24	6.4	12	18000	13	2700	230	J	0.0064	13	J	1500	J	0.28	U	0.079	U	93	
S-A3-19-5	SOIL	07/19/2002	32000	0.73	J	13	190	1.2	19	3400	37	6.1	21	31000	16	4100	280	J	0.023	18	J	2400	J	0.64	U	0.086	U	120	
S-A4-1-6	SOIL	07/19/2002	20000	0.36	U	3.4	120	0.97	0.41	1900	27	17	11	12000	15	2000	1200	J	0.013	24	J	690	J	0.61	U	0.073	U	120	

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Parameter		Solids, percent	Thallium	Vanadium	Zinc
Screening Levels mg/kg					
Ingestion-/Inhalation Industrial/ Commercial		--	160	1,400	61,000
	Soil -> GW	--	3	980	7,500
Eagle Zinc Company Site Data (mg/kg)					
Field ID	Matrix	Collection Date			
S-A1-6-9	SOIL	07/15/2002	U	89.2	0.47
					16
					11000
S-A1-23-7	SOIL	07/16/2002		83.7	0.9
					29
					5700
S-A1-7-3	SOIL	07/15/2002	U	83.3	0.7
					U
					39
					2800
S-A1-24-10	SOIL	07/16/2002	J	78.4	0.71
					U
					24
					2000
S-A1-3-9	SOIL	07/15/2002	U	85.6	0.41
					28
					1100
S-MA-6-4	SOIL	07/17/2002		78.8	1.4
					62
					550
S-MA-9-2	SOIL	07/17/2002	J	80.8	1.8
					U
					51
					2500
S-NA-8-2	SOIL	07/17/2002		78.8	0.39
					U
					41
					130
S-NA9-2D	SOIL	07/17/2002	J	82.4	0.74
					U
					52
					270
S-WA-8-2	SOIL	07/17/2002		70.3	2.1
					28
					2200
S-WA-9-2	SOIL	07/17/2002	U	76.9	0.36
					U
					26
					1400
S-NA9-2	SOIL	07/17/2002		79.7	0.89
					55
					350
A2-19-6	SOIL	07/18/2002	U	85.3	0.88
					57
					2200
A2-23-3	SOIL	07/18/2002	U	72	0.73
					47
					2700
A2-24-3	SOIL	07/18/2002	U	80.1	0.6
					39
					2700
A2-7-3	SOIL	07/18/2002		74.5	1.1
					69
					620
A2-15-3	SOIL	07/18/2002	U	79.4	0.59
					46
					1800
A3-23-2	SOIL	07/19/2002	U	78.9	1.3
					49
					1500
A3-20-2	SOIL	07/19/2002	J	79.3	1.7
					U
					57
					1900
A3-25-2	SOIL	07/18/2002		81.9	0.68
					U
					53
					1700
S-A4-22-2	SOIL	07/19/2002	U	78.5	1.1
					42
					420 J
S-A4-15-2	SOIL	07/19/2002	J	77.1	2
					UC
					59
					190 J
S-A4-15-2D	SOIL	07/19/2002	J	67.1	2.1
					U
					66
					400 J
S-A4-3-2	SOIL	07/19/2002		77	1.7
					U
					48
					350 J
S-A4-17-2	SOIL	07/19/2002	U	78.6	1.8
					U
					50
					990 J
S-A3-22-6	SOIL	07/19/2002		79.1	0.49
					47
					3900 J
S-A3-19-5	SOIL	07/19/2002		77.1	1.1
					72
					2000 J
S-A4-1-6	SOIL	07/19/2002		85.6	1.2
					37
					50 J

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control

": Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-5
Sediment Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter		1,1,1-Trichloroethane	1,1,2-Tetra-chloro-ethane	1,1,2-Trichloro-ethane	1,1,2-Trichloro-trifluoro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,2,4-Trichloro-benzene	1,2-Dibromo-3-chloropropane	1,2-Dibromo-ethane	1,2-Dichloro-benzene	1,2-Dichloro-ethane	1,2-Dichloropropane	1,3-Dichlorobenzene	
Screening Levels ug/kg															
Ingestion/Inhalation Residential Soil -> GW		1,200,000	--	310,000	--	1,300,000	700,000	780,000	460	7.5	560,000	400	9,000	--	
		200	--	20	--	23,000	60	5,000	2	0.4	17,000	20	30	--	
Eagle Zinc Company Site Data (ug/kg)															
FieldID	Matrix	Collection Date													
SD-WD-9	Sediment	07/09/2002	1.8 U	2 U	1.6 U	2.3 U	1.9 U	2.3 U	2 U	2.3 U	1.7 U	2.2 U	2 U	1.5 U	1.6 U
SD-ED-12	Sediment	07/09/2002	1.2 U	1.3 U	1.1 U	1.4 U	1.2 U	1.4 U	1.3 U	1.4 U	1.1 U	1.4 U	1.3 U	0.94 U	1 U
SD-ED-13	Sediment	07/09/2002	0.97 U	1 U	0.88 U	1.2 U	1 U	1.2 U	1.1 U	1.2 U	0.89 U	1.2 U	1.1 U	0.78 U	0.85 U
SD-WD-9D	Sediment	07/09/2002	1.9 U	2 U	1.7 U	2.3 U	2 U	2.3 U	2 U	2.3 U	1.7 U	2.3 U	2.1 U	1.5 U	1.6 U
MB1823955	Sediment	07/09/2002	0.81 U	0.87 U	0.73 U	1 U	0.86 U	1 U	0.88 U	1 U	0.74 U	0.99 U	0.89 U	0.65 U	0.71 U
SD-WD-7	Sediment	07/19/2002	1.4 U	1.5 U	1.3 U	1.7 U	1.5 U	1.7 U	1.5 U	1.7 U	1.3 U	1.7 U	1.5 U	1.1 U	1.2 U

Exceeds Screening Level for Soil -> GW pathway (or detection limit greater than Screening Level)

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-5
Sediment Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	1,4-Dichlorobenzene	2-Butanone	2-Hexanone	4-Methyl-2-penta-none	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromo-methane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloro-dibromo-methane		
Screening Levels ug/kg															
Ingestion/Inhalation															
Residential	11,000,000	--	--	--	7,800,000	800	10,000	53,000	10,000	720,000	300	130,000	1,300,000		
Soil -> GW	--	--	--	--	16,000	30	600	800	200	32,000	70	1,000	400		
Eagle Zinc Company Site Data (ug/kg)															
FieldID	Matrix	Collection Date													
SD-WD-9	Sediment	07/09/2002	2.1 U	8.6 J	2.5 U	1.6 U	26 J	2 U	1.9 U	1.7 U	2.7 U	2.7 U	2.1 U	2.2 U	1.8 U
SD-ED-12	Sediment	07/09/2002	1.4 U	1.9 R	1.6 U	1 U	3.9 R	1.3 U	1.2 U	1.1 U	1.7 U	1.7 U	1.4 U	1.4 U	1.1 U
SD-ED-13	Sediment	07/09/2002	1.1 U	1.6 R	1.3 U	0.85 U	3.2 R	1.1 U	1 U	0.93 U	1.4 U	1.4 U	1.1 U	1.2 U	0.95 U
SD-WD-9D	Sediment	07/09/2002	2.2 U	20 J	2.5 U	1.6 U	49 J	2.1 U	2 U	1.8 U	2.8 U	2.8 U	2.2 U	2.3 U	1.8 U
MB1823955	Sediment	07/09/2002	0.95 U	1.3 R	1.1 U	0.71 U	2.7 R	0.91 U	0.85 U	0.77 U	1.2 U	1.2 U	0.94 U	0.99 U	0.79 U
SD-WD-7	Sediment	07/19/2002	1.6 U	2.2 R	1.9 U	1.2 U	4.7 R	1.6 U	1.5 U	1.3 U	2.1 U	2.1 U	1.6 U	1.7 U	1.4 U

Exceeds Screening Level for Soil -> GW pathway (or detection limit greater than Screening Level)

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

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R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-5
Sediment Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Chloro-ethane	Chloro-form	Chloro-methane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cyclo-hexane	Dichlorodi-fluoromethane	Ethyl-benzene	Fluorotrichloro-methane	Isopropylbenzene	Methyl Acetate	Methyl-tert-butyl-ether	Methylcyclohexane	Methylene chloride		
Screening Levels ug/kg																
Ingestion/Inhalation																
Residential	--	300	--	780,000	1,100	--	--	400,000	--	--	--	--	--	13,000		
Soil -> GW	--	600	--	400	4	--	--	13,000	--	--	--	--	--	20		
Eagle Zinc Company Site Data (ug/kg)																
FieldID	Matrix	Collection Date														
SD-WD-9	Sediment	07/09/2002	1.9 U	1.9 U	1.8 U	4.1 J	1.6 U	5.9 U	1.6 U	1.9 U	2.5 U	1.8 U	6.3 U	2.1 U	6.1 U	2 U
SD-ED-12	Sediment	07/09/2002	1.2 U	1.2 U	1.1 U	1.4 U	1 U	3.8 U	1 U	1.2 U	1.6 U	1.1 U	4 U	1.3 U	3.9 U	1.3 U
SD-ED-13	Sediment	07/09/2002	1 U	1 U	0.94 U	1.2 U	0.84 U	3.1 U	0.85 U	1 U	1.3 U	0.95 U	3.4 U	1.1 U	3.2 U	1.1 U
SD-WD-9D	Sediment	07/09/2002	1.9 U	2 U	1.8 U	86 J	1.6 U	6 U	1.6 U	2 U	2.5 U	1.8 U	6.5 U	2.1 U	6.2 U	2.1 U
MB1823955	Sediment	07/09/2002	0.84 U	0.85 U	0.78 U	1 U	0.7 U	2.6 U	0.71 U	0.86 U	1.1 U	0.79 U	2.8 U	0.93 U	2.7 U	0.9 U
SD-WD-7	Sediment	07/19/2002	1.5 U	1.5 U	1.3 U	1.7 U	1.2 U	4.5 U	1.2 U	1.5 U	1.9 U	1.4 U	4.8 U	1.6 U	4.7 U	1.6 U

Exceeds Screening Level for Soil -> GW pathway (or detection limit greater than Screening Level)

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-5
Sediment Sample Results
Volatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Styrene	Tetra-chloro-ethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloro-ethene	Vinyl chloride	Xylene, -o	Xylenes, -m, -p
Screening Levels ug/kg									
Ingestion/Inhalation									
Residential	15,000	11,000	650,000	1,600,000	1,100	5,000	280	410,000	420,000
Soil -> GW	4,000	60	12,000	700	4	60	10	190,000	200,000
Eagle Zinc Company Site Data (ug/kg)									
FieldID	Matrix	Collection Date							
SD-WD-9	Sediment	07/09/2002	1.8 U	2.5 U	2.2 U	5.6 J	1.4 U	3 J	2.5 J
									2.7 U
SD-ED-12	Sediment	07/09/2002	1.2 U	1.6 U	1.4 U	1.2 U	0.91 U	1.4 U	1.3 U
								1.7 U	2.9 U
SD-ED-13	Sediment	07/09/2002	0.96 U	1.3 U	1.2 U	1 U	0.76 U	1.2 U	1.1 U
								1.4 U	2.4 U
SD-WD-9D	Sediment	07/09/2002	1.8 U	2.5 U	2.2 U	20 J	1.5 U	4.5 J	13 J
								2.8 U	4.6 U
MB1823955	Sediment	07/09/2002	0.8 U	1.1 U	0.97 U	0.83 U	0.63 U	1 U	0.89 U
								1.2 U	2 U
SD-WD-7	Sediment	07/19/2002	1.4 U	1.9 U	1.7 U	1.4 U	1.1 U	1.7 U	1.5 U
								2.1 U	3.5 U

Exceeds Screening Level for Soil -> GW pathway (or detection limit greater than Screening Level)

Exceeds Screening Level for ingestion / inhalation:

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-6
Sediment Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	1,2,4-Trichloro-benzene	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	2,2'-oxy-bis-(1-Chloropropane)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene
Screening Level ug/kg													
Ingestion/Inhalation Residential													
Soil -> GW													
780,000 560,000 -- 11,000,000 -- -- -- -- 1,600,000 -- 900 900 --													
5,000 17,000 -- 2,000 -- -- -- -- 9,000 -- 0.8 0.7 --													
Eagle Zinc Company Site Data (ug/kg)													
FieldID	Matrix	CollectionDate											
SD-WD-07	Sediment	07/08/2002	150 U	140 U	150 U	140 U	110 U	150 U	98 U	150 U	210 U	200 U	220 U& 130 U 110 U
SD-WD-9	Sediment	07/09/2002	180 U	170 U	180 U	170 U	130 U	180 U	120 U	180 U	250 U	240 U	260 U& 160 U 140 U
SD-ED-12	Sediment	07/09/2002	120 U	110 U	120 U	110 U	83 U	120 U	77 U	120 U	170 U	160 U	170 U& 100 U 90 U
SD-ED-13	Sediment	07/09/2002	120 U	110 U	120 U	110 U	87 U	120 U	80 U	120 U	170 U	170 U	180 U& 110 U 94 U
SD-WD-9D	Sediment	07/09/2002	170 U	160 U	170 U	160 U	130 U	170 U	120 U	170 U	250 U	240 U	260 U& 150 U 140 U
MB1823955	Sediment	07/09/2002	90 U	85 U	90 U	85 U	65 U	90 U	60 U	90 U	130 U	130 U	140 U 80 U 70 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-6
Sediment Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	2-Chloro-phenol	2-Methyl-naphthalene	2-Methyl-phenol	2-Nitro-aniline	2-Nitro-phenol	3,3-Dichlorobenzidine	3-Nitro-aniline	4,6-Dinitro-2-methyl-phenol	4-Bromo-phenyl phenyl ether	4-Chloro-3-methyl-phenol	4-Chloro-aniline	4-Chlorophenyl phenyl ether	4-Methyl-phenol
Screening Level ug/kg													
Ingestion/Inhalation													
Residential	--	--	3,900,000	--	--	1,000	--	--	--	--	--	--	--
Soil -> GW	--	--	15,000	--	--	7	--	-	--	--	--	--	--
Eagle Zinc Company Site Data (ug/kg)													
FieldID	Matrix	CollectionDate											
SD-WD-07	Sediment	07/08/2002	130 U	130 U	150 U	210 U	120 U	210 U&	81 U	170 U	98 U	170 U	98 U&
SD-WD-9	Sediment	07/09/2002	160 U	160 U	180 U	250 U	150 U	250 U&	97 U	200 U	120 U	200 U	120 U&
SD-ED-12	Sediment	07/09/2002	100 U	100 U	120 U	170 U	96 U	170 U&N	64 U	130 U	77 U	130 U	77 U&N
SD-ED-13	Sediment	07/09/2002	110 U	110 U	120 U	170 U	100 U	170 U&	67 U	140 U	80 U	140 U	80 U&
SD-WD-9D	Sediment	07/09/2002	150 U	150 U	170 U	250 U	140 U	250 U&	97 U	200 U	120 U	200 U	120 U&
MB1823955	Sediment	07/09/2002	80 U	80 U	90 U	130 U	75 U	130 U	50 U	110 U	60 U	110 U	60 U
Exceeds Screening Level for Soil -> GW pathway													
Exceeds Screening Level for ingestion / inhalation													
Detection Limit above Screening Level													
U: indicates undetected at concentration													
J: Estimated Value													
R: Result is rejected and unusable													
C: Elevated detection limit due to matrix													
&: Lab control spike recovery not within control limits													
*: Duplicate analyses not within control limits													
N: Spiked sample not within control limits													

Table IV-6
Sediment Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	4-Nitro-aniline	4-Nitro-phenol	Acena-phthene	Acena-phthylene	Acetopheno-ne	Anthra-cene	Atra-zine	Benz-alde-hyde	Benzo(a)anthra-cene	Benzo(a)-pyrene	Benzo(b)fluor-anthene	Benzo(g,h,i)-perylene	Benzo-(k)-fluor-anthene
Screening Level ug/kg													
Ingestion/Inhalation													
Residential	--	--	4,700,000	--	--	23,000,000	2,700,000	--	900	90	900	--	9,000
Soil -> GW	--	--	570,000	--	---	12,000,000	66	--	2,000	8,000	5,000	--	49,000
Eagle Zinc Company Site Data (ug/kg)													
FieldID	Matrix	CollectionDate											
SD-WD-07	Sediment	07/08/2002	390 U	380 U	140 U	120 U	150 U	110 U	98 U	110 U	150 U	120 U	200 U
SD-WD-9	Sediment	07/09/2002	470 U	460 U	170 U	150 U	180 U	130 U	120 U	140 U	180 U	150 U	230 U
SD-ED-12	Sediment	07/09/2002	310 U	300 U	110 U	96 U	120 U	83 U	77 U	90 U	120 U	96 U	150 U
SD-ED-13	Sediment	07/09/2002	320 U	320 U	110 U	100 U	120 U	87 U	80 U	94 U	120 U	100 U	160 U
SD-WD-9D	Sediment	07/09/2002	460 U	450 U	160 U	140 U	170 U	130 U	120 U	140 U	170 U	140 U	230 U
MB1823955	Sediment	07/09/2002	240 U	240 U	85 U	75 U	90 U	65 U	60 U	70 U	90 U	75 U	120 U
Exceeds Screening Level for Soil -> GW pathway													
Exceeds Screening Level for ingestion / inhalation													
Detection Limit above Screening Level													

U: indicates undetectable at concentration
J: Estimated Value

R: Result is rejected and unusable
C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits
*: Duplicate analyses not within control limits
N: Spiked sample not within control limits

Table IV-6
Sediment Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Biphenyl	bis-(2-Chloroethoxy)-methane	bis-(2-Chloroethyl)-ether	bis(2-Ethylhexyl)phthalate	Butyl-benzyl-phthalate	Caprolactam	Carbazole	Chrysene	Di-n-butyl-phthalate	Di-n-octyl-phthalate	Dibenzo-(a,h)anthracene	Dibenzofuran	Diethyl-phthalate
Screening Level ug/kg													
Ingestion/Inhalation													
Residential	--	--	200	46,000	930,000	--	32,000	88,000	2,300,000	--	90	--	2,000,000
Soil -> GW	--	--	0.4	3,600,000	930,000	--	600	160,000	2,300,000	--	2,000	--	470,000
Eagle Zinc Company Site Data (ug/kg)													
FieldID	Matrix	CollectionDate											
SD-WD-07	Sediment	07/08/2002	130 U	120 U	110 U	130 U	130 U	120 U	250 U	170 U	130 U	170 U	98 U&
													160 U
SD-WD-9	Sediment	07/09/2002	160 U	150 U	140 U	160 U	160 U	150 U	300 U	200 U	160 U	200 U	120 U&
													190 U
SD-ED-12	Sediment	07/09/2002	100 U	96 U	90 U	100 U	100 U	96 U	200 U	130 U	100 U	130 U	77 U&N
													130 U
SD-ED-13	Sediment	07/09/2002	110 U	100 U	94 U	110 U	110 U	100 U	210 U	140 U	110 U	140 U	80 U&
													130 U
SD-WD-9D	Sediment	07/09/2002	150 U	140 U	140 U	150 U	150 U	140 U	300 U	200 U	150 U	200 U	120 U&
													190 U
MB1823955	Sediment	07/09/2002	80 U	75 U	70 U	80 U	80 U	75 U	160 U	110 U	80 U	110 U	60 U
													100 U

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-6
Sediment Sample Results
Semivolatile Organic Compounds
Eagle Zinc Company Site, Hillsboro, IL

Parameter	Di-methyl-phthalate	Fluoran-thene	Fluorene	Hexa-chloro-benzene	Hexa-chloro-butadiene	Hexa-chloro-cyclopenta-diene	Hexa-chloro-ethane	Indeno-(1,2,3-cd)-pyrene	Isophorone	N-Nitroso-di-n-propylamine	N-Nitrosodiphenylamine	Naphthalene
Screening Level ug/kg												
Ingestion/Inhalation												
Residential	--	3,100,000	3,100,000	400	--	10,000	78,000	900	4,600,000	90	130,000	170,000
Soil -> GW	--	4,300,000	560,000	2,000	--	400,000	500	14,000	8,000	0.05	1,000	12,000
Eagle Zinc Company Site Data (ug/kg)												
FieldID	Matrix	CollectionDate										
SD-WD-07	Sediment	07/08/2002	150 U	190 U	160 U	81 U	150 U	98 U&	140 U	120 U	98 U&	110 U
SD-WD-9	Sediment	07/09/2002	180 U	220 U	190 U	97 U	180 U	120 U&	170 U	150 U	120 U&	130 U
SD-ED-12	Sediment	07/09/2002	120 U	150 U	130 U	64 U	120 U	77 U&N	110 U	96 U	77 U&N	83 U
SD-ED-13	Sediment	07/09/2002	120 U	150 U	130 U	67 U	120 U	80 U&	110 U	100 U	80 U&	87 U
SD-WD-9D	Sediment	07/09/2002	170 U	220 U	190 U	97 U	170 U	120 U&	160 U	140 U	120 U&	130 U
MB1823955	Sediment	07/09/2002	90 U	110 U	100 U	50 U	90 U	60 U	85 U	75 U	60 U	65 U
Exceeds Screening Level for Soil -> GW pathway												
Exceeds Screening Level for ingestion / inhalation												
Detection Limit above Screening Level												
U: indicates undetected at concentration												
J: Estimated Value												
R: Result is rejected and unusable												
C: Elevated detection limit due to matrix												
&: Lab control spike recovery not within control limits												
*: Duplicate analyses not within control limits												
N: Spiked sample not within control limits												

Table IV-7
Sediment Sample Results
PCBs
Eagle Zinc Company Site, Hillsboro, IL

Parameter		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
<i>Screening Level) ug/kg</i>								
Ingestion/Inhalation								
Residential		1,000	1,000	1,000	1,000	1,000	1,000	1,000
Soil -> GW								
<i>Eagle Zinc Company Site Data (ug/kg)</i>								
Field ID	Matrix	Collection Date						
SD-WD-07	Sediment	07/08/2002	21	U*	21	U	21	U
SD-WD-9	Sediment	07/09/2002	25	U*	25	U	25	U
SD-ED-12	Sediment	07/09/2002	17	U*	17	U	17	U
SD-ED-13	Sediment	07/09/2002	17	U*	17	U	17	U
SD-WD-9D	Sediment	07/09/2002	25	U*	25	U	25	U

Exceeds Screening Level for Soil -> GW pathway (or detection limit greater than Screening Level)

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table 8
Sediment Sample Results
Metals
Eagle Zinc Company Site, Hillsboro, IL

Parameter		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	
Screening Levels mg/kg																
Ingestion/inhalation	Residential	--	31	11.3	5,500	160	78	--	230	4,700	2,900	--	400	--	3,700	
	Soil -> GW	--	5	29	1,700	140	11	--	--	--	200,000	--	--	--	--	
Eagle Zinc Company Data (mg/kg)																
Field ID	Matrix	Collection Date														
SD-WD-01	Sediment	07/08/2002	7700	0.52	3.4 J	50 J	0.36 J	1.2	7200	8.1 J	2.8	9.9	7300	26	1900 J	230
SD-WD-02	Sediment	07/08/2002	6200	0.45 U	3.9 J	53 J	0.43 J	1.6	14000	8.9 J	4	15	9800	49	2400 J	420
SD-WD-03	Sediment	07/08/2002	2400	0.48	2.5 J	51 J	0.31 J	0.96	8200	5.9 J	1.9	27	6900	32	1700 J	190
SD-WD-04	Sediment	07/08/2002	2300	0.83	3.2 J	30 J	0.27 J	0.83	10000	6.7 J	3.4	5.7	6900	29	2700 J	330
SD-WD-06	Sediment	07/08/2002	4200	1.7	8 J	67 J	0.52 J	23	3600	10 J	4.1	51	20000	290 J	1000	380
SD-WD-05	Sediment	07/08/2002	2800	0.58	5.4 J	65 J	0.45 J	0.48	18000	7.3 J	3.5	9.6	11000	28	2100 J	480
SD-ED-16	Sediment	07/08/2002	6600	1.9	3.2 J	63 J	0.5 J	8.9	4100	10 J	6	53	8500	87	1800 J	390
SD-ED-14	Sediment	07/08/2002	9600	1.8	7.2 J	71 J	0.75 J	3.7	15000	14 J	12	18	19000	75	3200 J	750
SD-WD-10	Sediment	07/08/2002	12000	2.1	15 J	86 J	0.92 J	1.4	5500	27 J	6.1	30	16000	46	1800 J	100
SD-ED-15	Sediment	07/08/2002	3900	0.84	5.8 J	44 J	0.39 J	2.3	6000	7.1 J	6.6	4.8	11000	20	3500 J	740
SD-WD-07	Sediment	07/08/2002	6400	12	25 J	190 J	0.69 J	96	2600	22 J	6.1	320	45000	2700	1200 J	110
SD-WD-9	Sediment	07/09/2002	7500	2.1	7.9 J	76 J	0.65 J	550	2400	17 J	11	58	29000	220	1000 J	230
SD-WD-8	Sediment	07/09/2002	19000	2.8	7 J	99 J	1.1 J	17	2900	26 J	14	97	20000	450	2300 J	360
SD-ED-11	Sediment	07/09/2002	6000	0.42	2.1 J	68 J	0.42 J	0.91	1900	11 J	1.8	7.5	5100	14	740 J	130
SD-ED-12	Sediment	07/09/2002	6100	0.62	2.4 J	82 JN	0.36 J	2.4	1300	11 J	1.2	8.9	5100	25 *	760 J	70
SD-ED-13	Sediment	07/09/2002	4900	2.3	6.1 J	59 J	0.43 J	13	23000	8.5 J	7.3	52	15000	84	5400 J	340
SD-WD-9D	Sediment	07/09/2002	7600	2.1	5.1 J	67 J	0.67 J	550	2300	12 J	9.3	65	19000	240	1000 J	150

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Sediment Sample Results

Metals

Eagle Zinc Company Site, Hillsboro, IL.

Parameter	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc		
Screening Levels mg/kg											
Ingestion/Inhalation	Residential	10	1,600	--	390	390	--	6	550	23,000	
	Soil -> GW	3.3	180	--	5	13	--	3	980	7,500	
Eagle Zinc Company Data (mg/kg)											
Field ID	Matrix	Collection Date									
SD-WD-01	Sediment	07/08/2002	0.065	6.7 A	570 J	0.67 UJ	0.1 U	88 UJA	0.71 UJA	11 J	500 J
SD-WD-02	Sediment	07/08/2002	0.06	8.9 A	470 J	0.55 UJ	0.09 U	67 UJA	0.58 UJA	12 J	1400 J
SD-WD-03	Sediment	07/08/2002	0.031	4.7 A	300 J	0.56 UJ	0.091 U	79 UJA	0.59 UJA	7.8 J	400 J
SD-WD-04	Sediment	07/08/2002	0.012	4.2 A	270 J	0.52 UJ	0.089	61 UJA	0.55 UJA	9.5 J	520 J
SD-WD-06	Sediment	07/08/2002	0.9	12	400 J	0.62 UJ	0.25 J	23 UJ	0.65 UJA	13 J	10000 J
SD-WD-05	Sediment	07/08/2002	0.0093	6.5 A	320 J	0.64 UJ	0.1 U	150 JA	0.66 UJA	11 J	310 J
SD-ED-16	Sediment	07/08/2002	0.15	17	620 J	0.72 UJ	0.46	26 UJ	0.75 UJA	15 J	8400 J
SD-ED-14	Sediment	07/08/2002	0.064	15	860 J	0.53 UJ	0.079 U	86 UJA	0.55 UJA	27 J	5100 J
SD-WD-10	Sediment	07/08/2002	0.057	16 A	1200 J	1.1 UJ	0.15 U	96 UJA	1.1 UJA	26 J	920 J
SD-ED-15	Sediment	07/08/2002	0.0046 U	7.9	440 J	0.44 UJ	0.066 U	40 UJA	0.46 UJA	16 J	530 J
SD-WD-07	Sediment	07/08/2002	0.16	27	610 J	1.4 J	2.4	89 UJA	0.62 UJA	23 J	23000 J
SD-WD-9	Sediment	07/09/2002	1.3	29	690 J	1.1 J	0.37	28 UJ	0.82 UJA	34 J	12000 J
SD-WD-8	Sediment	07/09/2002	1.4	26	1400 J	0.73 UJ	0.99	27 UJ	0.77 UJA	30 J	7600 J
SD-ED-11	Sediment	07/09/2002	0.013 J	5 A	720 J	0.49 UJ	0.074 U	69 UJA	0.51 UJA	14 J	460 J
SD-ED-12	Sediment	07/09/2002	0.019	4.6 A	660 J	0.53 UJ	0.079 U	92 UJA	0.56 UJA	13 J	830 J*
SD-ED-13	Sediment	07/09/2002	0.024	15	530 J	0.5 UJ	0.39	21 UJA	0.52 UJA	16 J	11000 J
SD-WD-9D	Sediment	07/09/2002	1.7	25	730 J	1.1 J	0.38	26 UJ	0.75 UJA	20 J	9700 J

Exceeds Screening Level for Soil -> GW pathway

Exceeds Screening Level for ingestion / inhalation

Detection Limit above Screening Level

U: Indicates undetected at concentration listed

J: Estimated Value

R: Result is rejected and unusable

C: Elevated detection limit due to matrix effect

&: Lab control spike recovery not within control limits

*: Duplicate analyses not within control limits

N: Spiked sample not within control limits

Table IV-9
Residue Sample Results
Metals
Eagle Zinc Company Site, Hillsboro, IL

		Parameter	Arsenic - SPLP	Arsenic - TCLP	Barium - SPLP	Barium - TCLP	Cadmium - SPLP	Cadmium - TCLP	Chromium - SPLP	Chromium - TCLP	Lead - SPLP	Lead - TCLP
Eagle Zinc Company Site Data (mg/L)												
FieldID	Matrix	Collection Date										
R-RC0-5	Residue	07/09/2002	0.015 U	0.2 U	0.068	1	0.003 U	0.14	0.003 U	0.05 U	0.01 U	0.2 U
R-MP1-21	Residue	07/09/2002	0.015 U	0.2 U	0.059	0.21	0.076	0.21	0.003 U	0.05 U	0.62	83
R-RR1-1	Residue	07/09/2002	0.015 U	0.2 U	0.11	0.44	0.0035	0.11	0.003 U	0.05 U	0.01 U	0.35
R-RR1-3	Residue	07/09/2002	0.015 U	0.2 U	0.089	0.39	0.045	0.47	0.003 U	0.05 U	0.01 U	14
R-RR1-2	Residue	07/09/2002	0.015 U	0.2 U	0.078	0.26	0.0043	0.088	0.003 U	0.05 U	0.01 U	0.2 U
R-RR1-4	Residue	07/09/2002	0.015 U	0.2 U	0.024	0.66	0.003 U	0.05 U	0.003 UN	0.05 U	0.01 U	0.2 U
R-RR1-4D	Residue	07/09/2002	0.015 U	0.2 U	0.024	0.82	0.003 U	0.05 U	0.003 U	0.05 U	0.01 U	0.2 U
R-RR0-12	Residue	07/10/2002	0.015 U	0.2 U	0.063	0.49	0.003 U	0.05 U	0.003 U	0.05 U	0.01 U	0.2 U
R-NP-13	Residue	07/10/2002	0.015 U	0.2 U	0.019	0.38	0.003 U	0.14	0.003 U	0.05 U	0.01 U	0.2 U
R-NP-14	Residue	07/10/2002	0.015 U	0.2 U	0.035	0.37	0.017	0.35	0.003 U	0.05 U	0.01 U	0.23
R-RR2-11	Residue	07/11/2002	0.015 U	0.2 U	0.13	0.75	0.003 U	0.076	0.003 U	0.05 U	0.01 U	6
R-NP-15	Residue	07/11/2002	0.015 U	0.2 U	0.069	0.51	0.003 U	0.11	0.003 U	0.05 U	0.01 U	0.2 U
R-CPH-6	Residue	07/11/2002	0.015 U	0.2 U	0.057	0.2 U	0.003 U	0.1	0.003 U	0.05 U	0.01 U	0.33
R-NP-16	Residue	07/11/2002	0.015 U	0.2 U	0.064	0.47	0.003 U	0.074	0.003 U	0.05 U	0.01 U	0.2 U
R-RC0-10	Residue	07/11/2002	0.015 U	0.2 U	0.12	0.75	0.003 U	0.05 U	0.003 U	0.05 U	0.01 U	0.86
R-CPH-9	Residue	07/11/2002	0.015 U	0.2 U	0.078	0.57	0.003 U	0.05 U	0.003 U	0.05 U	0.01 U	0.2 U

U: Indicated undetected at concentration listed

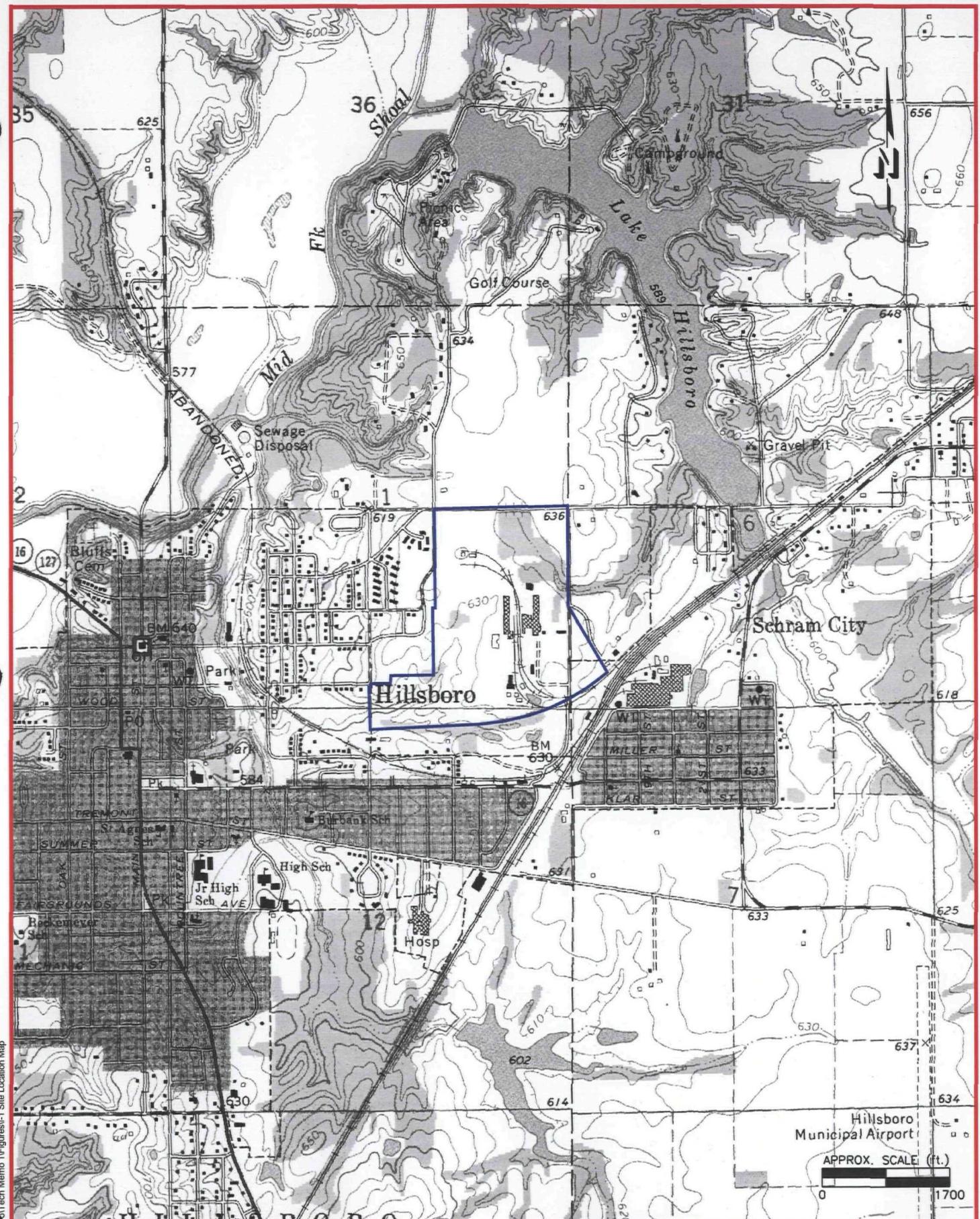
Table IV-9
Residue Sample Results
Metals
Eagle Zinc Company Site, Hillsboro, IL

		Parameter
Eagle Zinc Company Site Data (mg/L)		
FieldID	Matrix	Collection Date
R-RC0-5	Residue	07/09/2002
R-MP1-21	Residue	07/09/2002
R-RR1-1	Residue	07/09/2002
R-RR1-3	Residue	07/09/2002
R-RR1-2	Residue	07/09/2002
R-RR1-4	Residue	07/09/2002
R-RR1-4D	Residue	07/09/2002
R-RR0-12	Residue	07/10/2002
R-NP-13	Residue	07/10/2002
R-NP-14	Residue	07/10/2002
R-RR2-11	Residue	07/11/2002
R-NP-15	Residue	07/11/2002
R-CPH-6	Residue	07/11/2002
R-NP-16	Residue	07/11/2002
R-RC0-10	Residue	07/11/2002
R-CPH-9	Residue	07/11/2002

Mercury - SPLP	Mercury - TCLP	Selenium - SPLP	Selenium - TCLP	Silver - SPLP	Silver - TCLP
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
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0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U
0.0002 U	0.0002 U	0.015 U	0.2 U	0.005 U	0.05 U

U: Indicated undetected at concentration listed

FIGURES



CPF/Eagle Zinc-Hillsboro Tech Memo (Figure I-1 Site Location Map)

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Site Location Map
Eagle Zinc
Hillsboro, Illinois

Figure
I-1

Drafter: APR

Date: 9/06/02

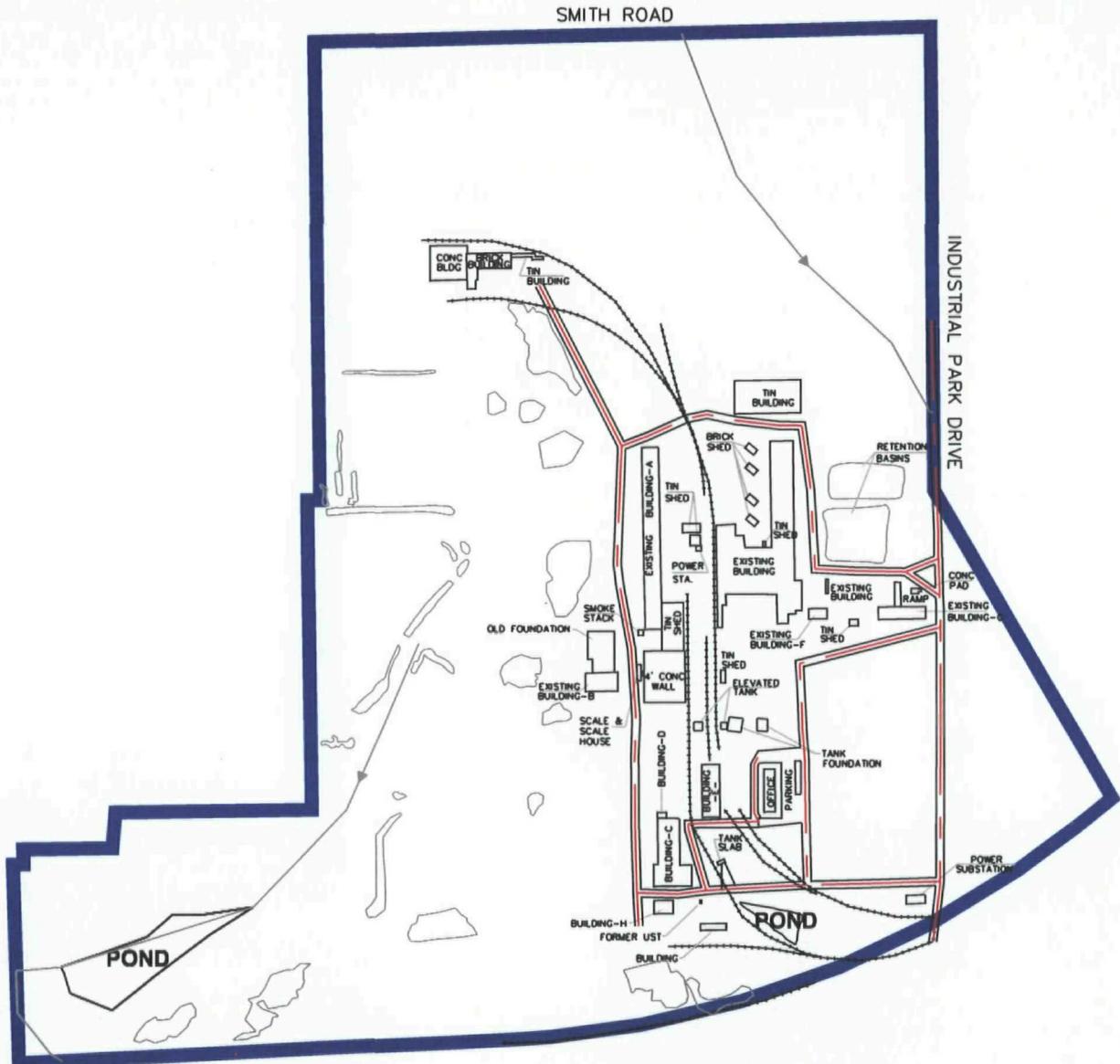
Contract Number:

21-7400E

Approved:

Revised:

APPROX. SCALE (ft.)
0 1700

Legend

- Cloud symbol: Residue Piles
- Arrow symbol: Stormwater Drainageway

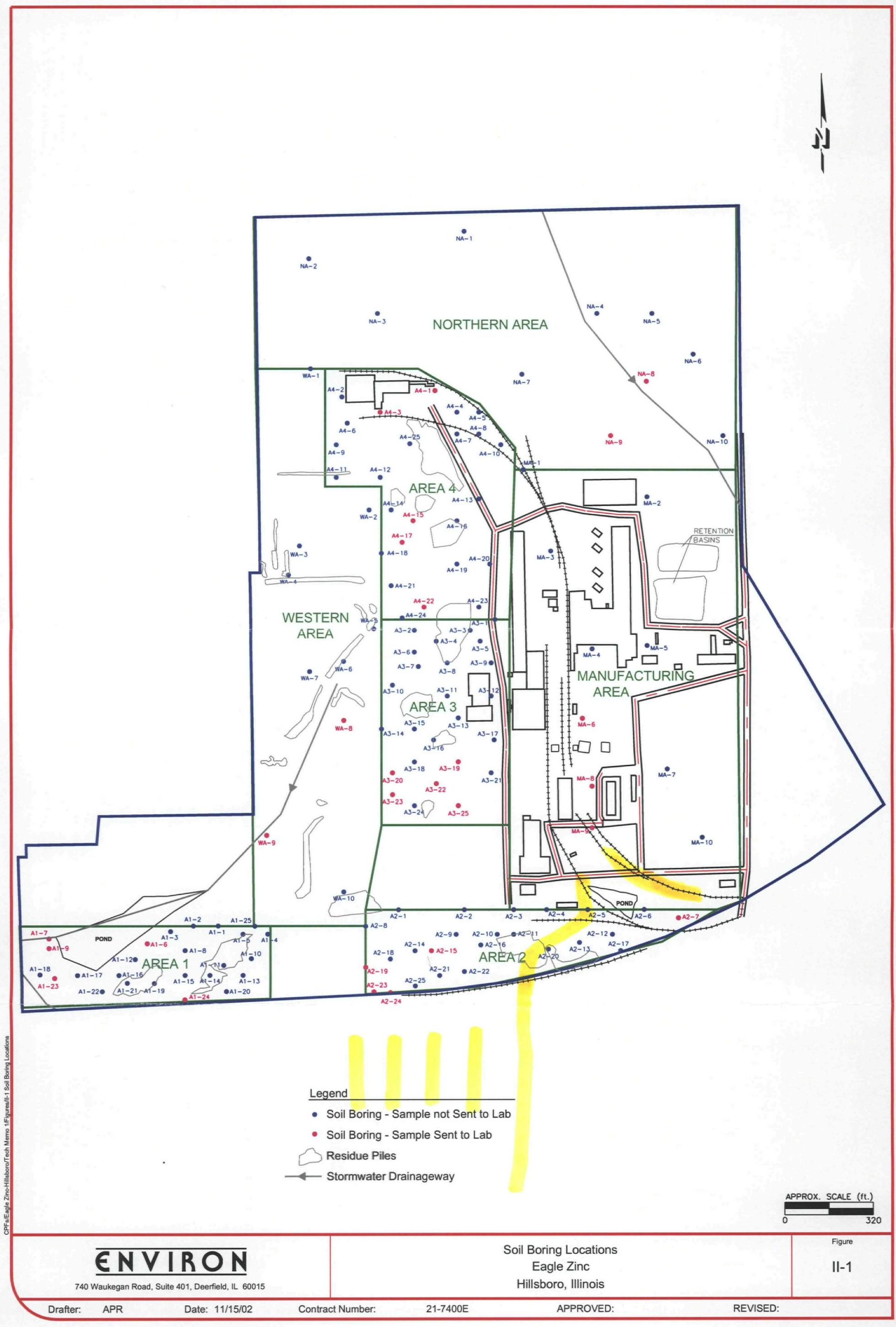
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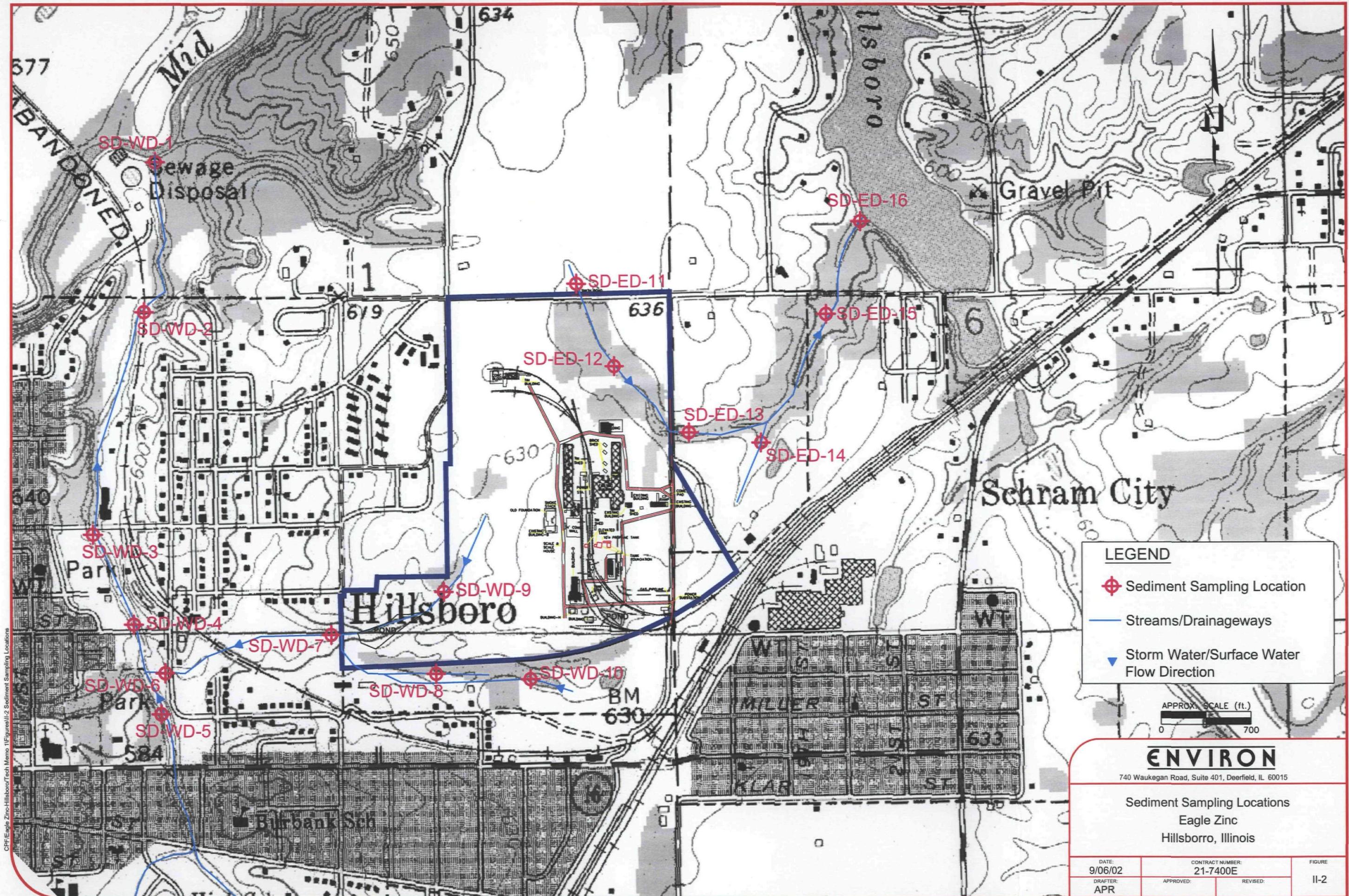
ENVIRON

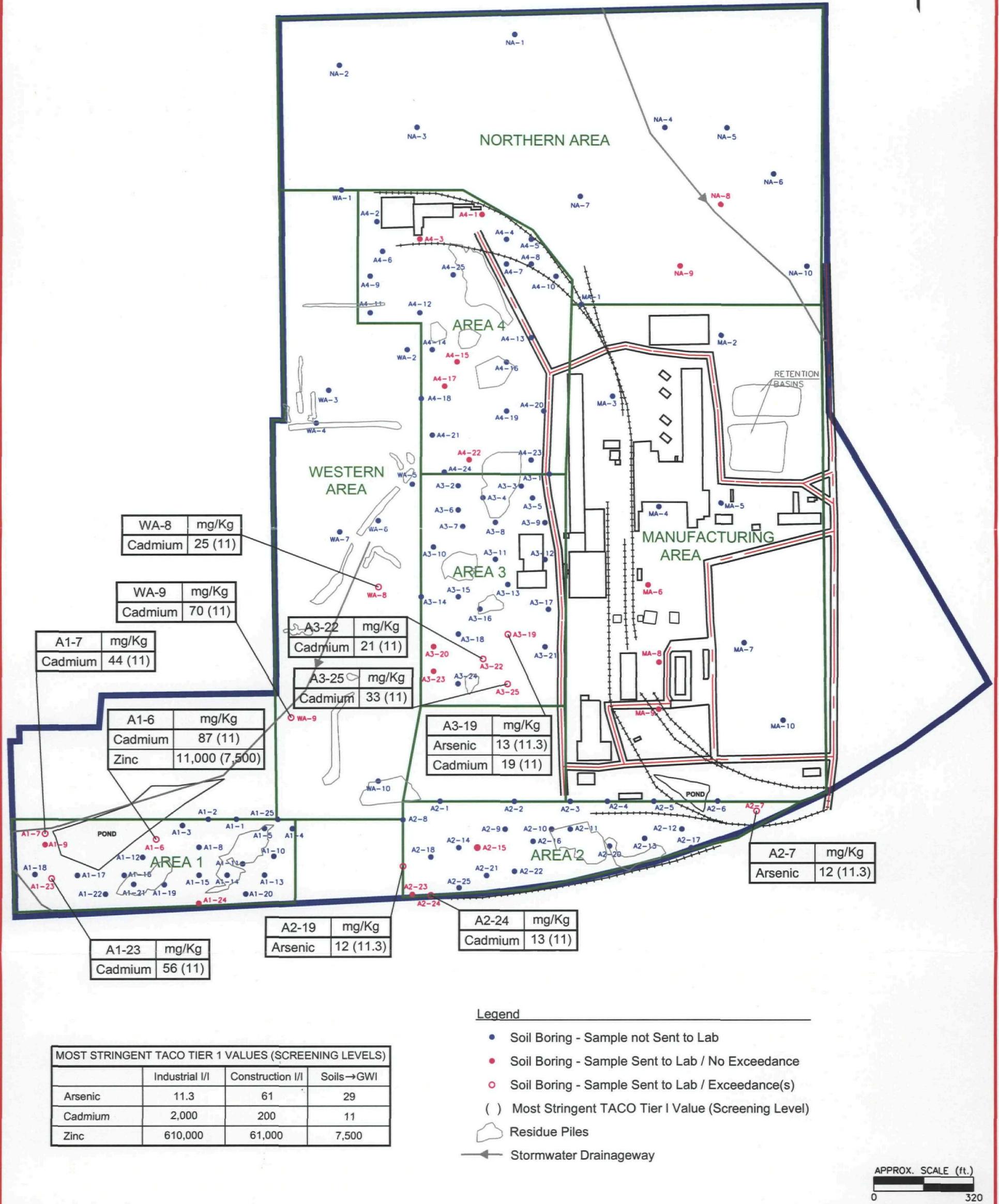
740 Waukegan Road, Suite 401, Deerfield, IL 60015

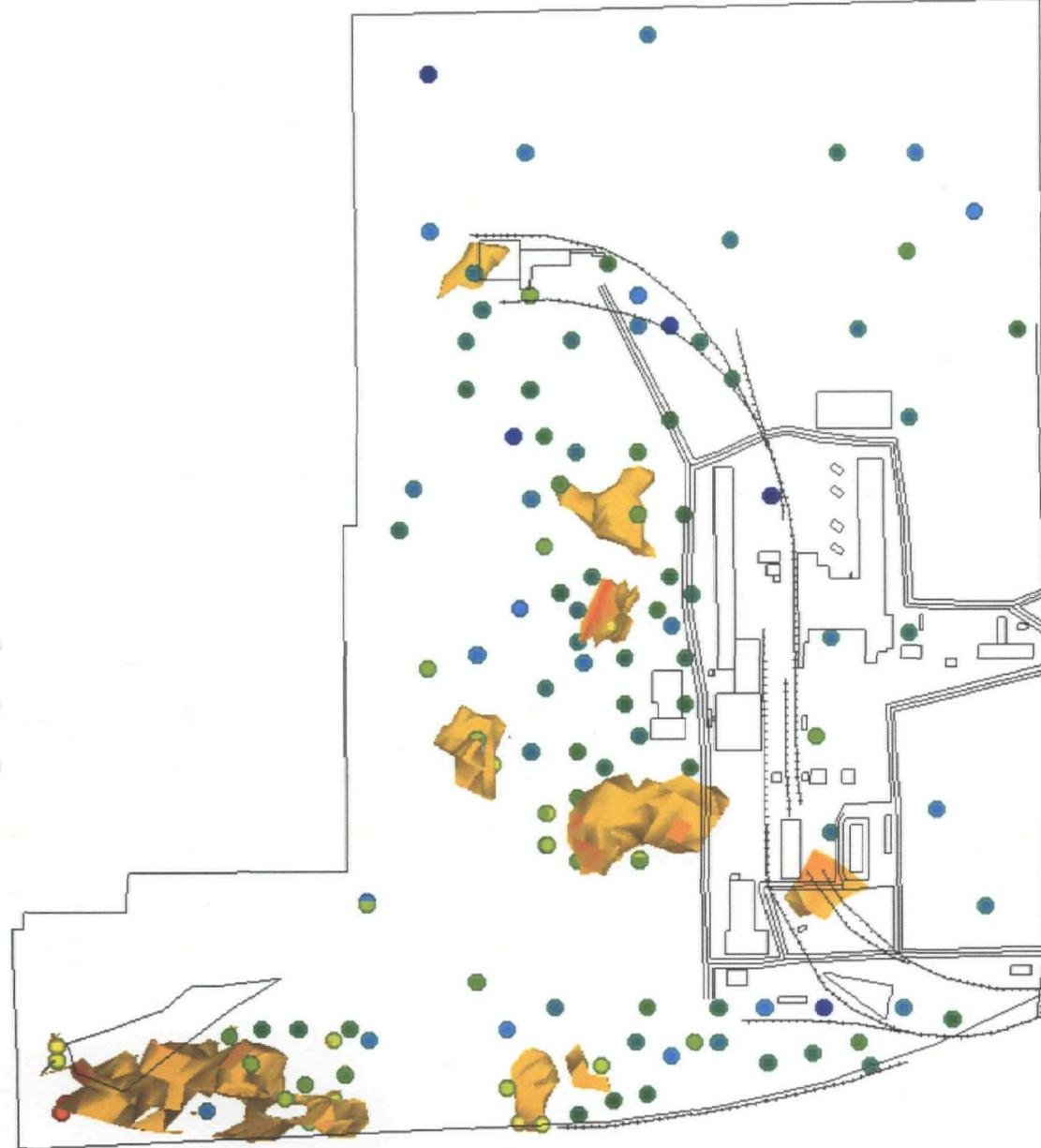
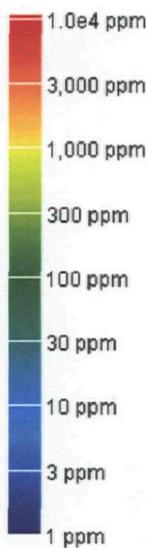
Site Layout Map
Eagle Zinc
Hillsboro, IL

Figure
I-2

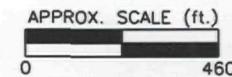








Note: Determined using Environmental Visualization Software (EVS). Areas of cadmium exceedance for XRF screening data based on site-wide zinc/cadmium ratio. Plot depicts zinc levels > 1,653 mg/kg, predicted to have cadmium levels > screening levels.



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Inferred Cadmium Exceedances of Screening Levels
Eagle Zinc
Hillsboro, Illinois

Drafter: APR

Date: 11/15/02

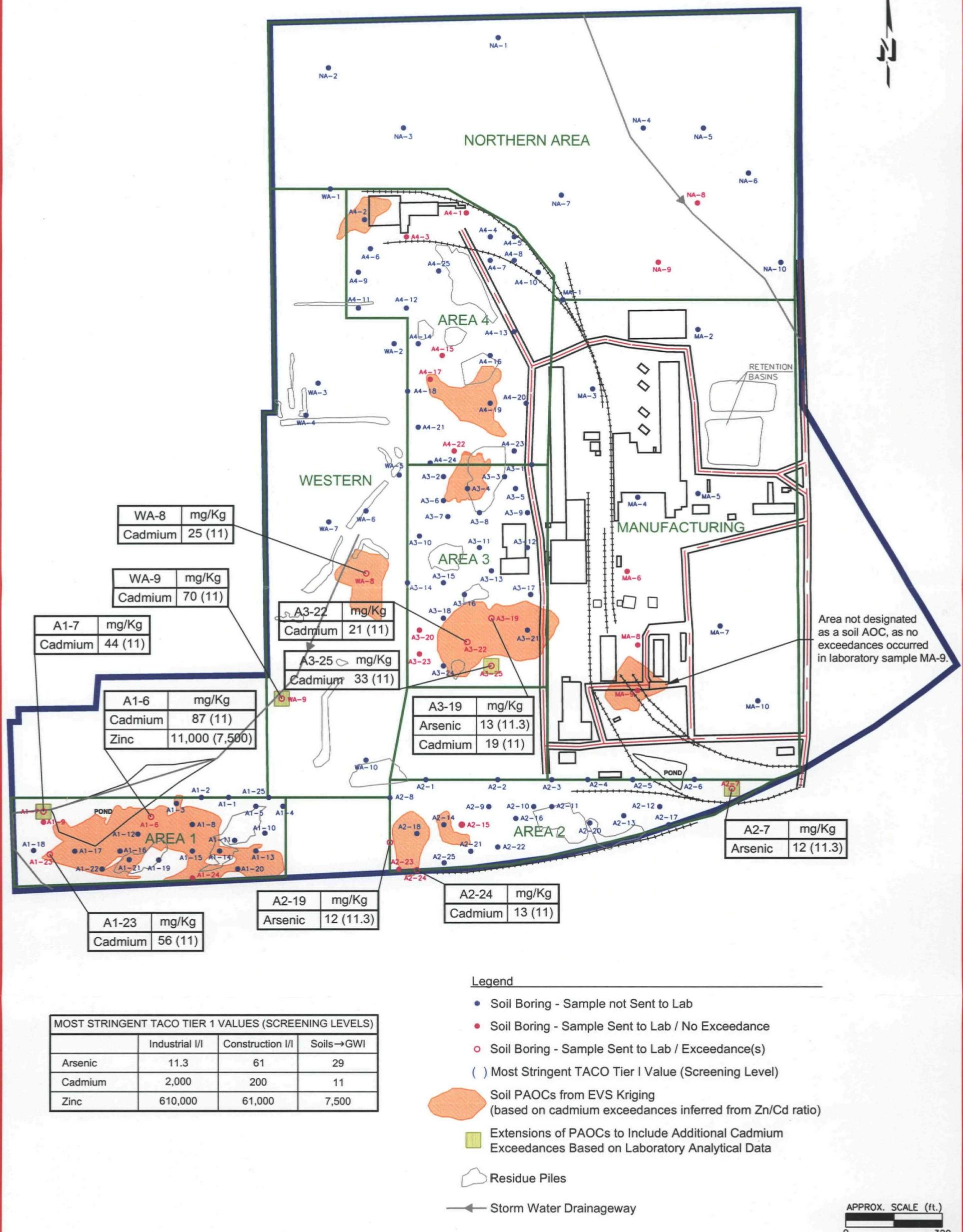
Contract Number:

21-7400E

Approved:

Revised:

Figure
IV-2



ENVIRON

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Soil Sampling Results Above Screening Levels
Eagle Zinc
Hillsboro, Illinois

Figure
IV-3

Drafter: APR

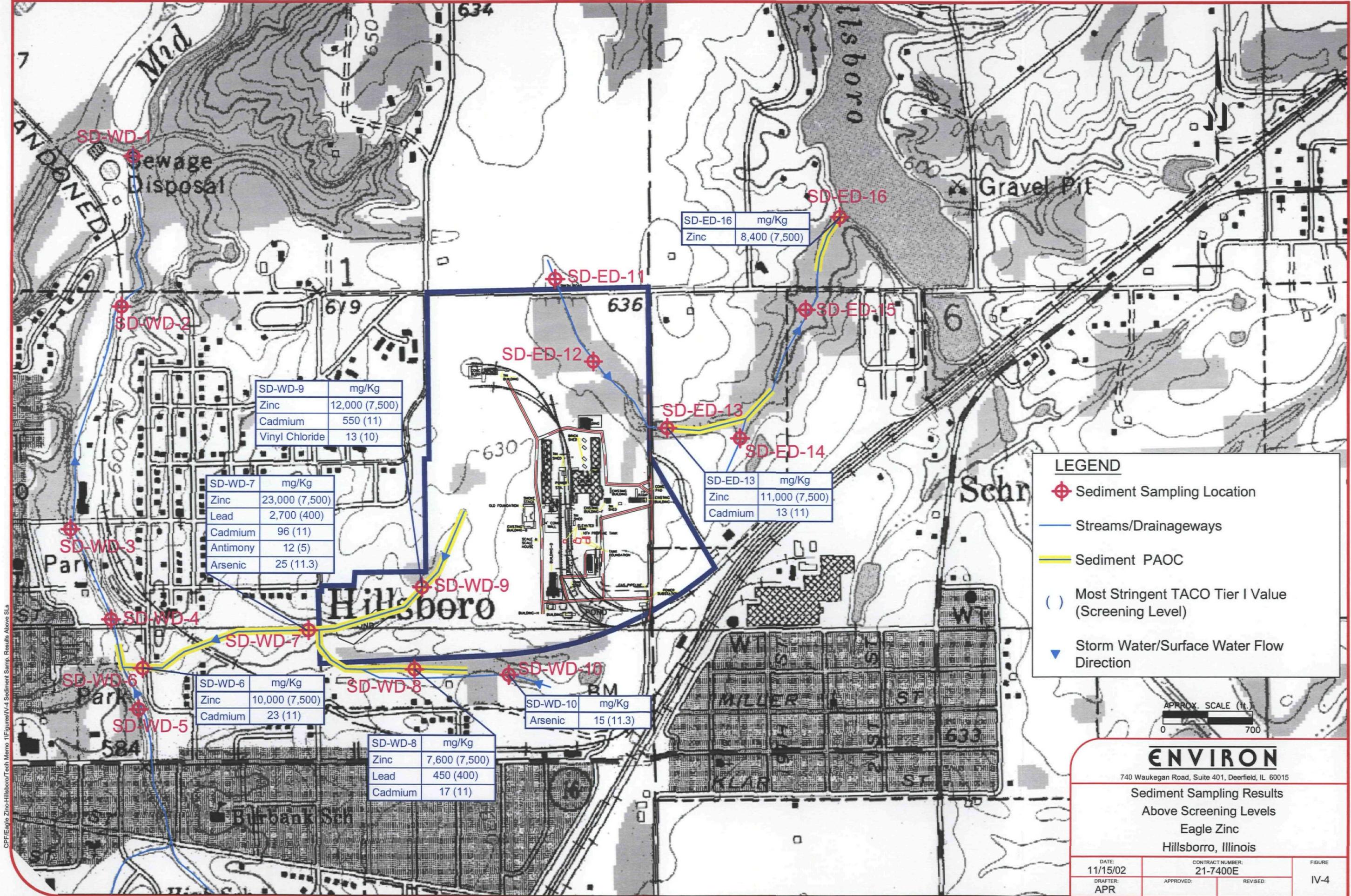
Date: 11/15/02

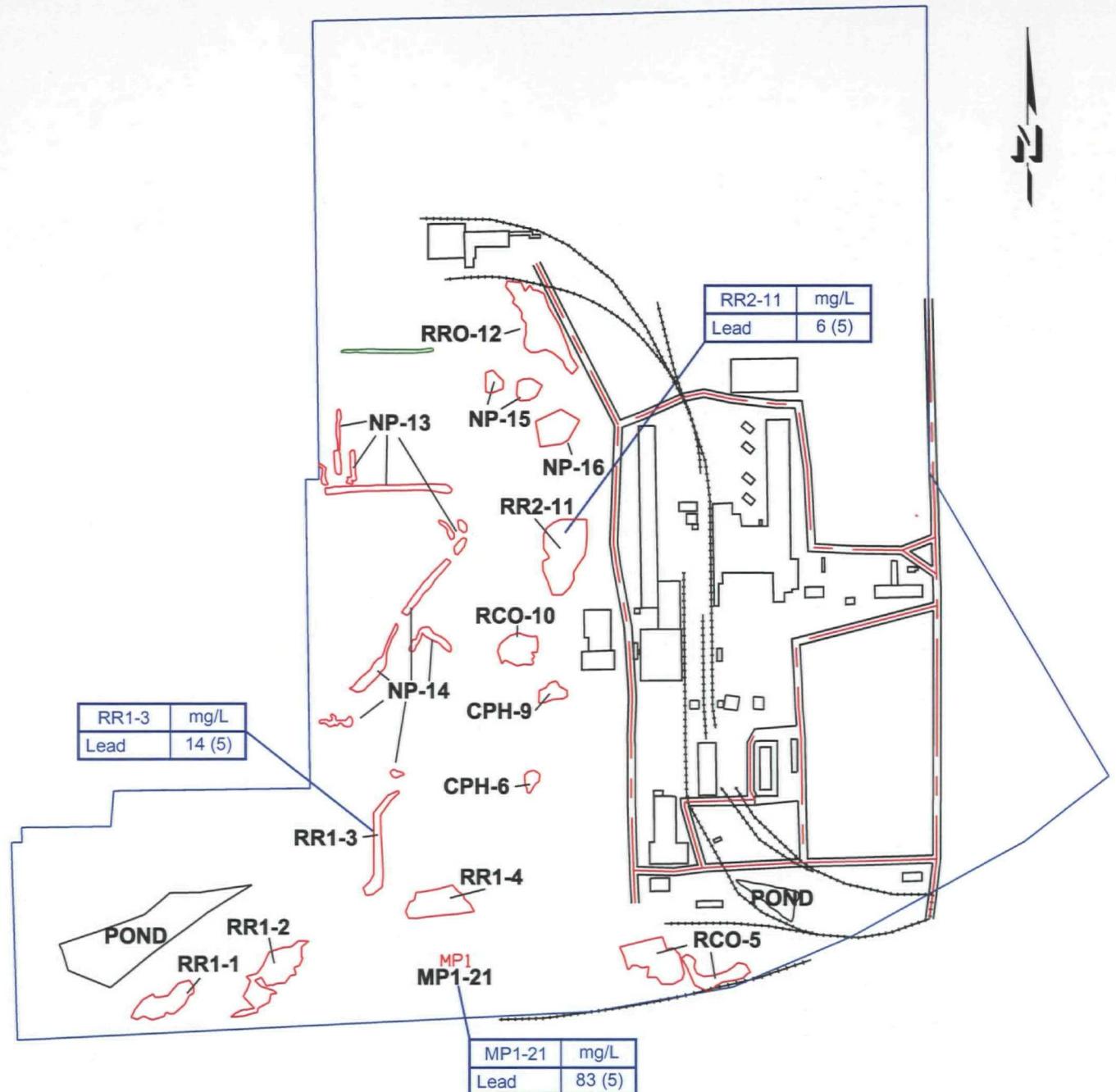
Contract Number:

21-7400E

APPROVED:

REVISED:





Sampled Residue Piles.

Unsampled Residue Pile - insignificant residue quantity identified

RR1 = Rotary Residue Type 1

RR2 = Rotary Residue Type 2

RCO = Rotary Clean Out

RRO = Rotary Residue Oversize

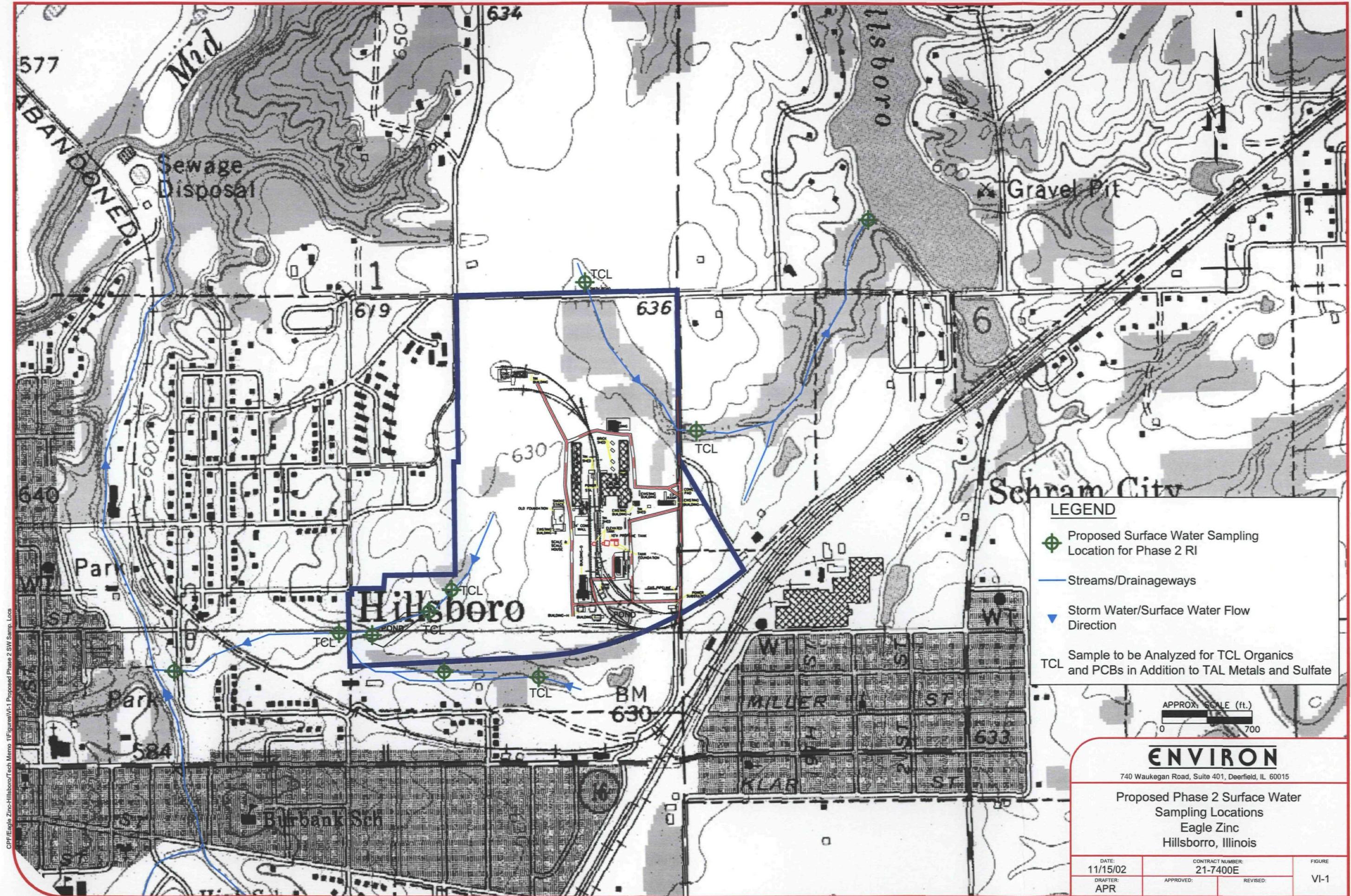
CPH = Carbon Plant Hutch

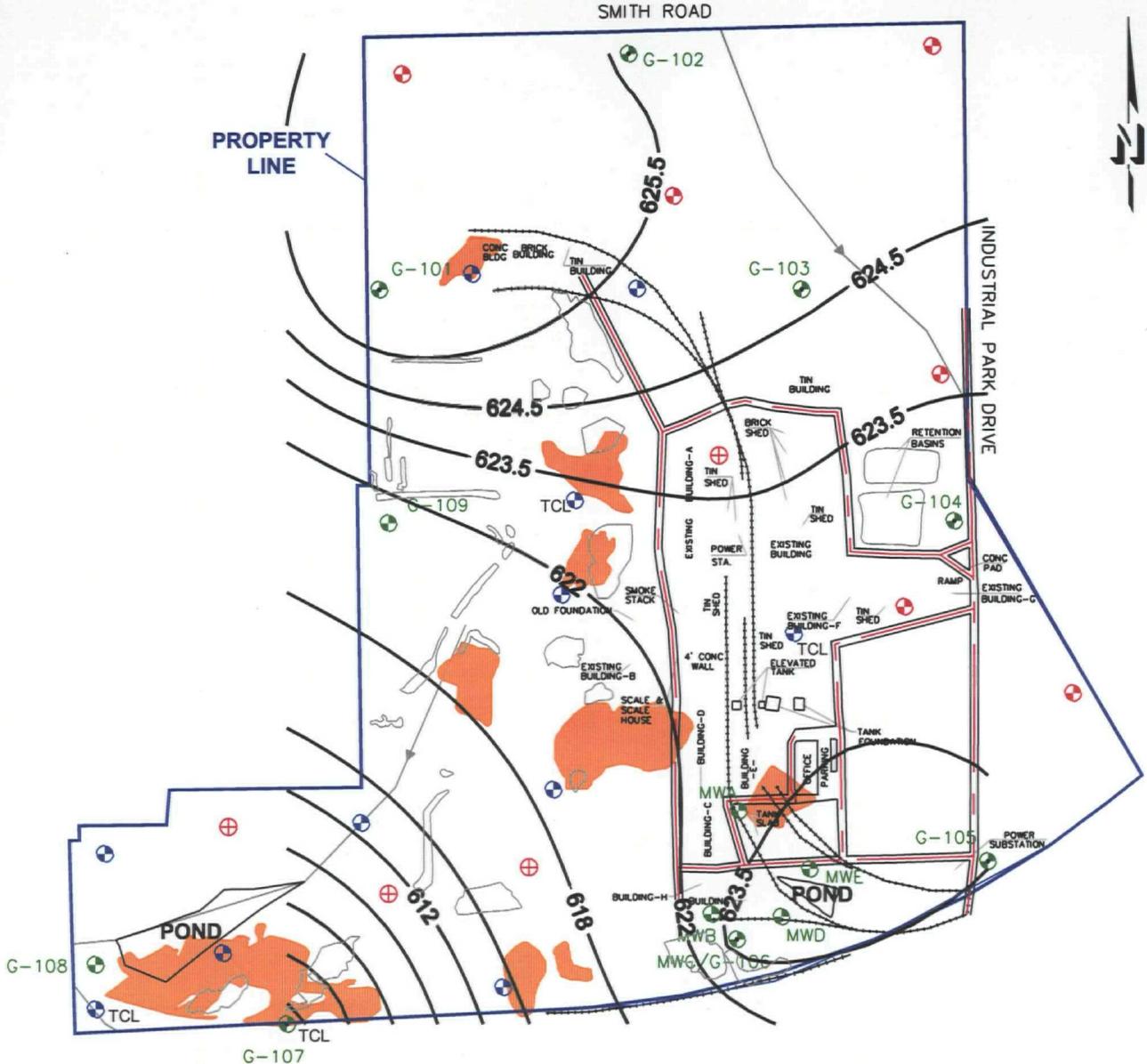
MP = Miscellaneous Piles

NP = Newly Identified Piles

() = RCRA Hazardous Waste Threshold
for TCLP Lead of 5.0 mg/L

APPROX. SCALE (ft.)
0 450





APPROX. SCALE (ft.)
0 500

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Proposed Phase 2 Piezometer
and Monitoring Well Locations
Eagle Zinc
Hillsboro, Illinois

Figure
VI-2

A P P E N D I X A

Topographic Survey Map

SDMS US EPA Region V

Imagery Insert Form

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A P P E N D I X B

Soil Boring Logs

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

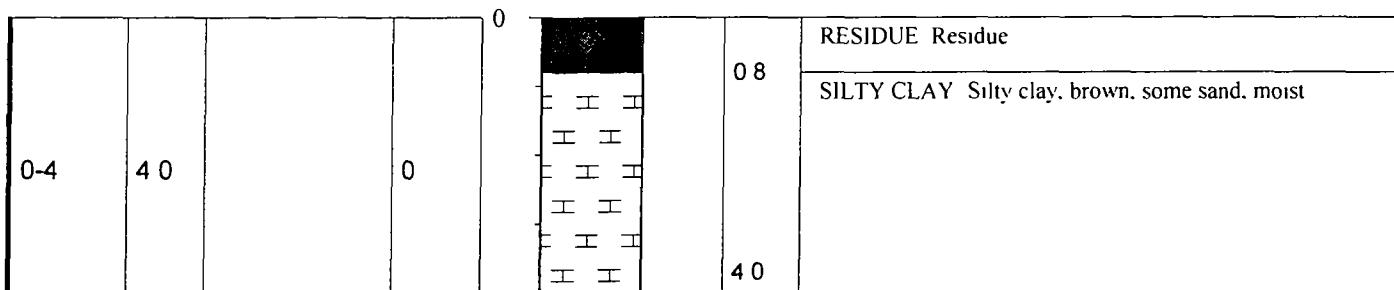
BOREHOLE NO.: A1-1

TOTAL DEPTH: 4 feet

PROJECT:	Eagle Zinc	DRILLING CO.:	Philips
SITE LOCATION:	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS:	Macrosampler
DATES DRILLED	07/16/02	HAMMER WT /DROP	--

SURVEY LOCATION: E694717.8 N908219

GROUND SURFACE ELEVATION.- N/A -



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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-2

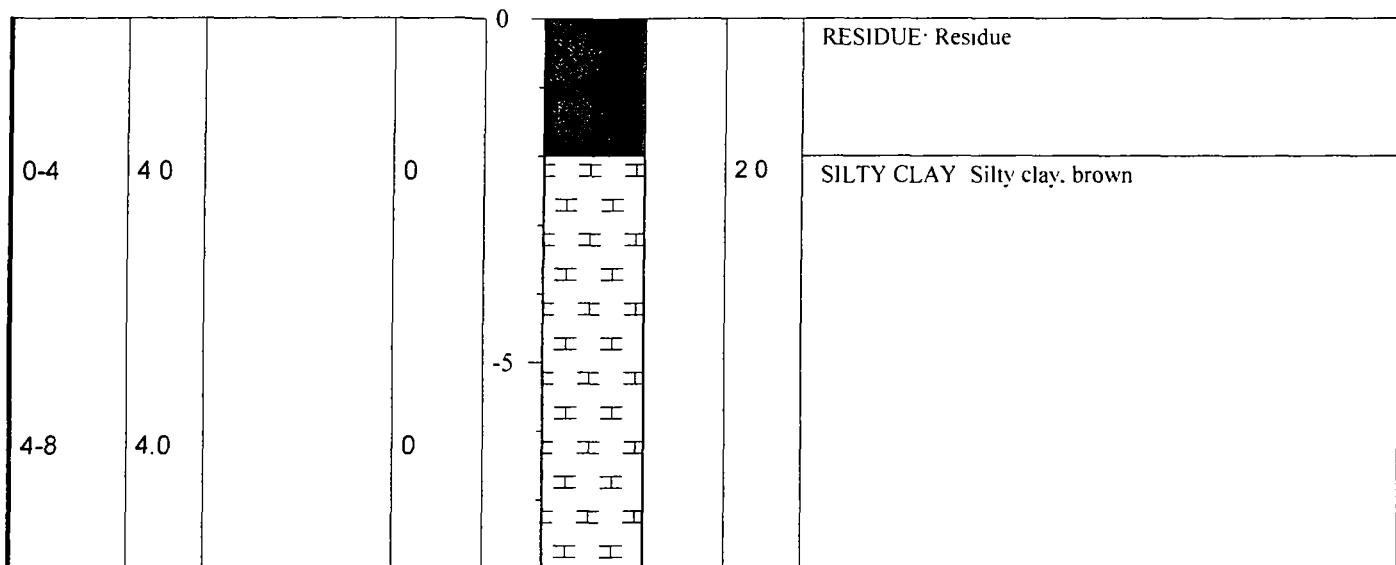
TOTAL DEPTH: 8 feet

PROJECT:	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macrosampler
DATES DRILLED	07/16/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 694537.8 N 908249

GROUND SURFACE ELEVATION: 614.62'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



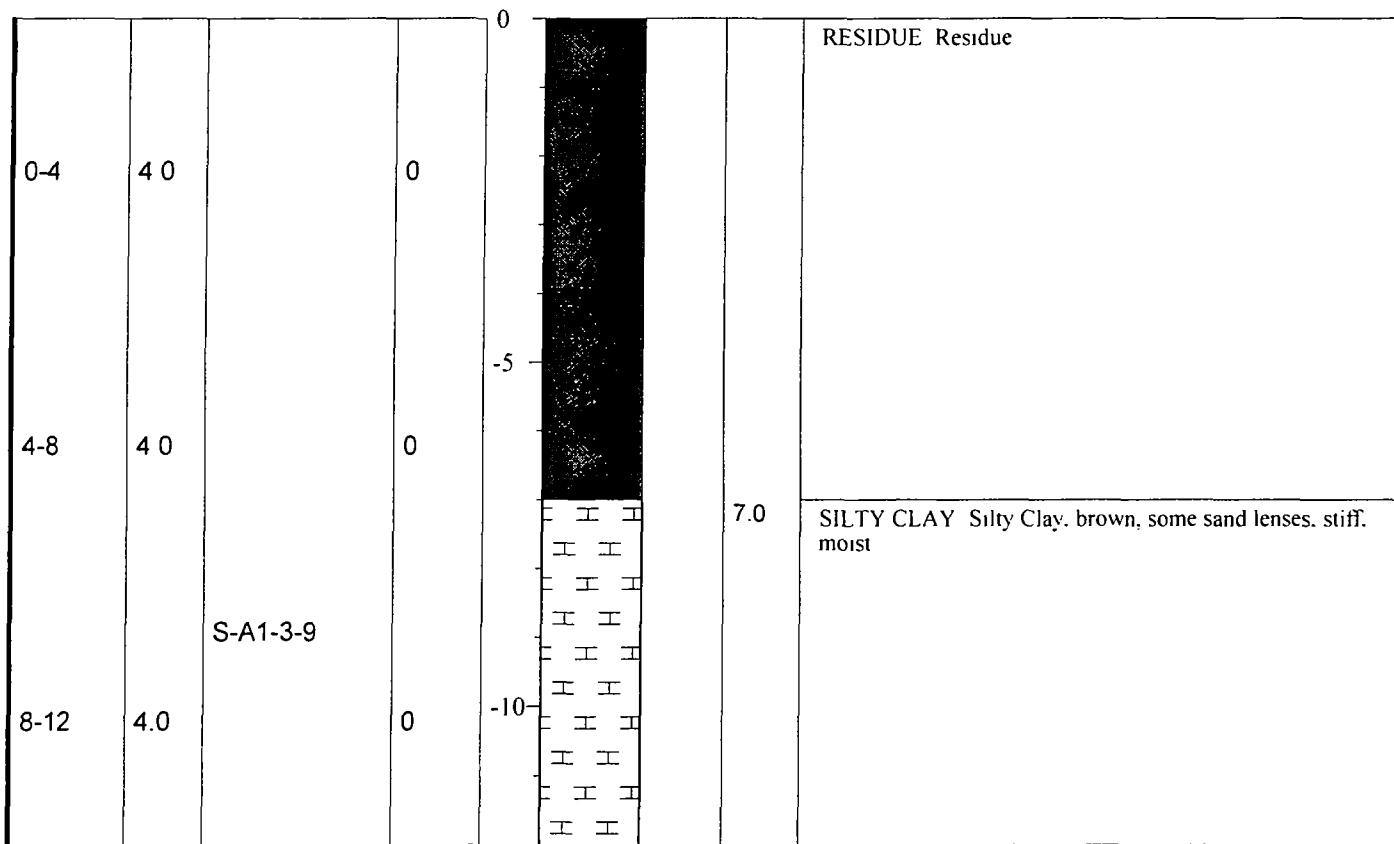
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-3
TOTAL DEPTH: 12 feet

PROJECT. SITE LOCATION: JOB NO LOGGED BY DATES DRILLED.	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/15/02	DRILLING CO RIG TYPE METHOD OF DRILLING: SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macrosampler --					
SURVEY LOCATION:	E 694455.2 N 908228.8 GROUND SURFACE ELEVATION: 605.75'							
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG**BOREHOLE NO.: A1-4****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/16/02**

DRILLING CO: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macrosampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: **E 694807.8 N 908219**GROUND SURFACE ELEVATION: **620.78'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4 0		0	0	H H H H H H H H		1 5	RESIDUE: Residue SILTY CLAY: Silty clay, brown, some sand, moist

0-4	4 0		0	0	H H H H H H H H		1 5	RESIDUE: Residue SILTY CLAY: Silty clay, brown, some sand, moist
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-5

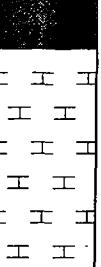
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION.	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macrosampler
DATES DRILLED	07/16/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 694717.8 N 908219

GROUND SURFACE ELEVATION:N/A

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0-4	4.0		0	0			0.8	RESIDUE: Residue
							4.0	SILTY CLAY Silty clay, brown, some sand, moist

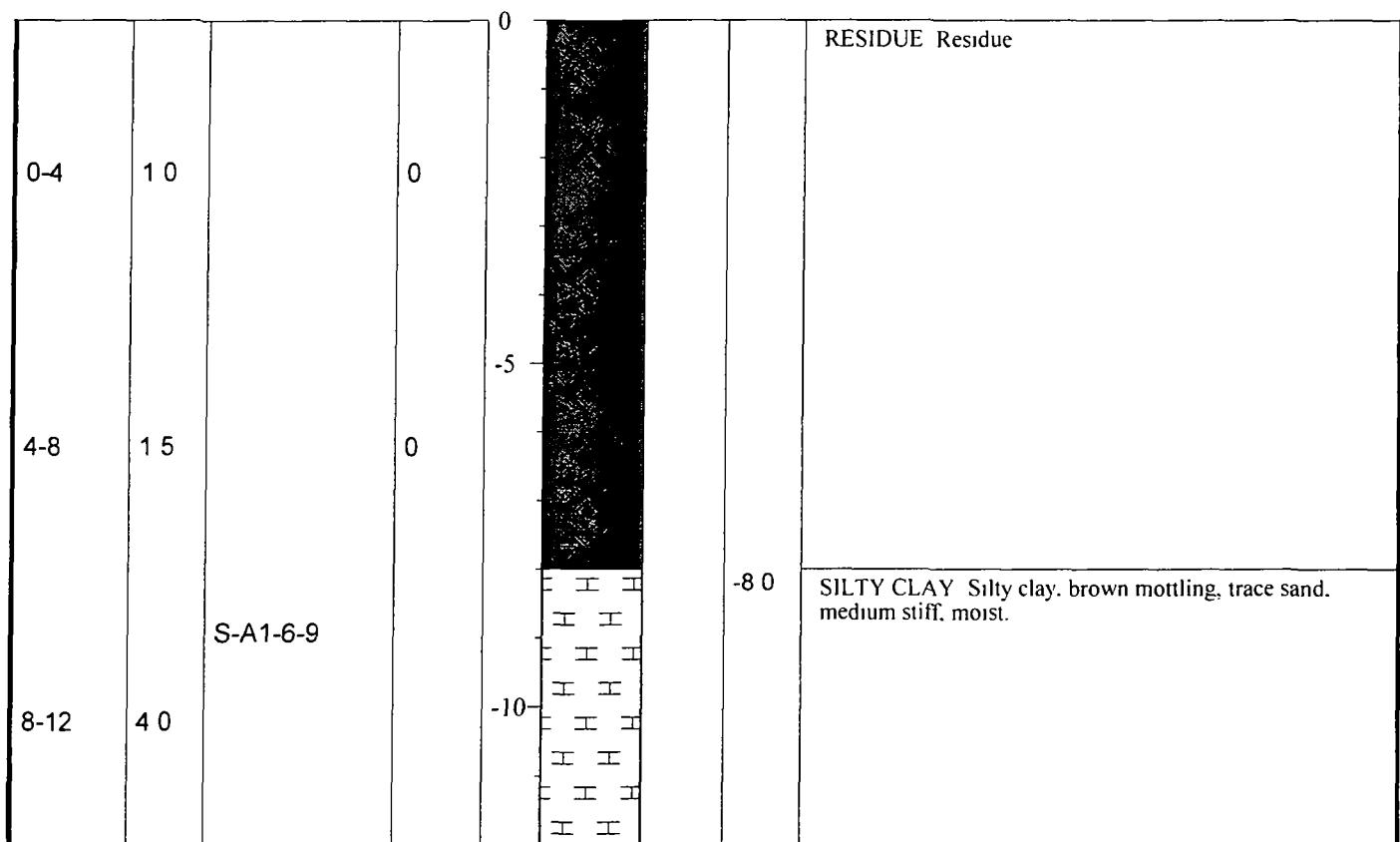
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-6
TOTAL DEPTH: 12 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macrosampler					
DATES DRILLED	07/15/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E 694371 N 908184.3		GROUND SURFACE ELEVATION:600.39'						
ISS INTERVAL (ft)	SSS RECOVERY (ft)	SAMPLE ID	PIID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-7

TOTAL DEPTH: 4 feet

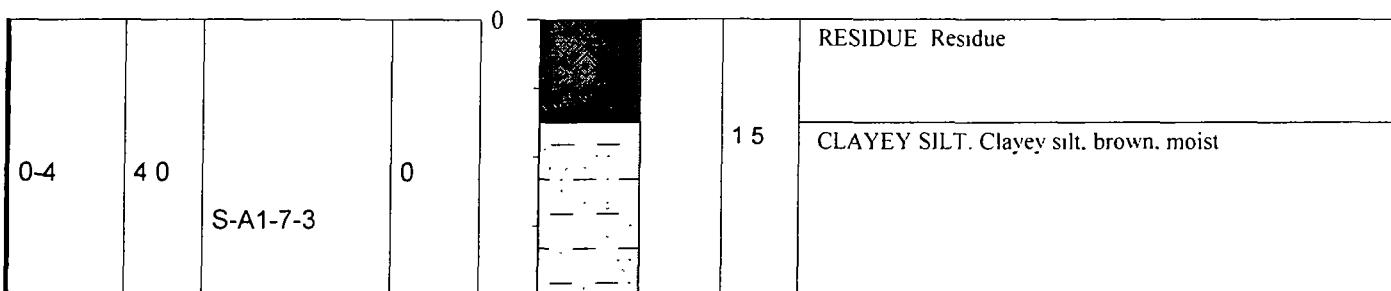
PROJECT Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/15/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 694014.6 N 908202.6

GROUND SURFACE ELEVATION:N/A

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4 0	S-A1-7-3	0	0			1 5	RESIDUE Residue CLAYEY SILT. Clayey silt. brown. moist



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-8

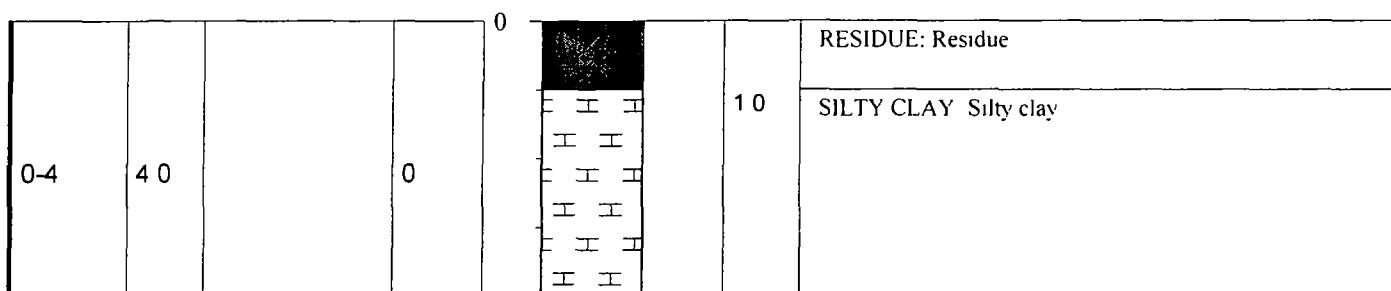
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO :	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED:	07/16/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 964807.8, N 908219

GROUND SURFACE ELEVATION:620.78'

SSS INTERVAL (ft)	SSS RECOVERY (ft)	SAMPLE ID	P1D (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
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GEOLOGIC DRILL LOG**BOREHOLE NO.: A1-9****TOTAL DEPTH: 8 feet**

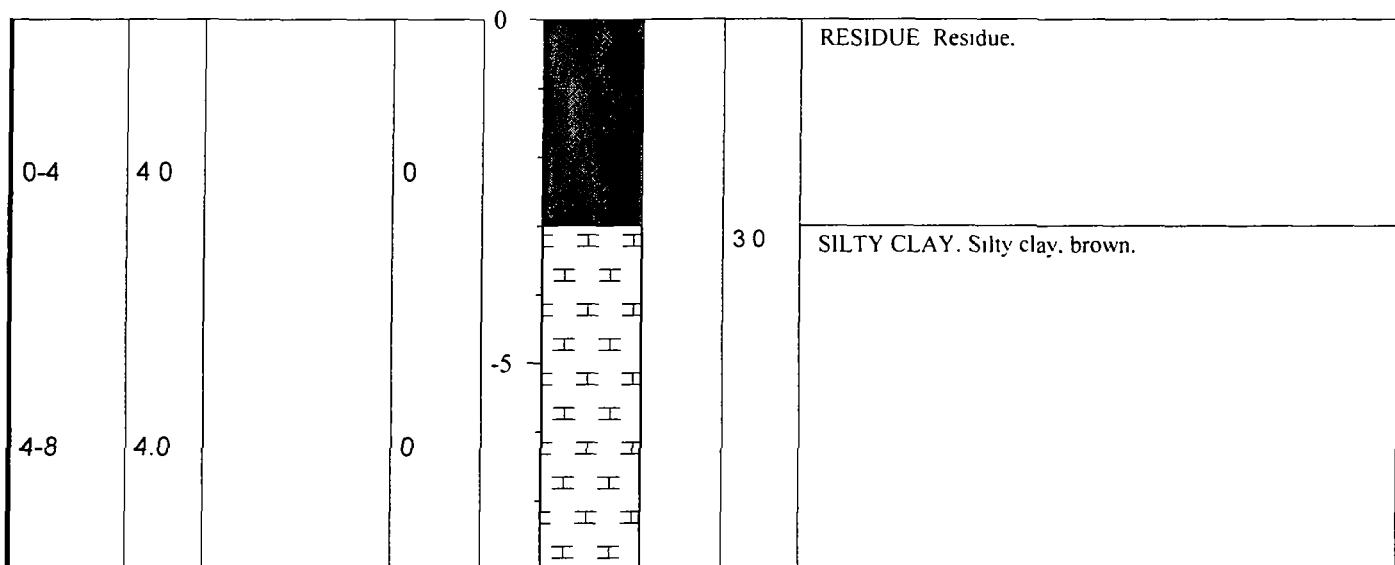
PROJECT. **Eagle Zinc**
SITE LOCATION. **Hillsboro, IL**
JOB NO **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED **07/16/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E 694014.7, N 908167.2

GROUND SURFACE ELEVATION: 593.17'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-10****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION. **Hillsboro, IL**
JOB NO : **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED **07/15/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS **Macrosampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E 694627.8 N 908249**GROUND SURFACE ELEVATION: 616.38'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H		2.0	RESIDUE Residue SILTY CLAY Silty clay, brown, moist

0-4	4.0		0	0	H H H H H H H H		2.0	RESIDUE Residue SILTY CLAY Silty clay, brown, moist
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-11

TOTAL DEPTH: 4.0

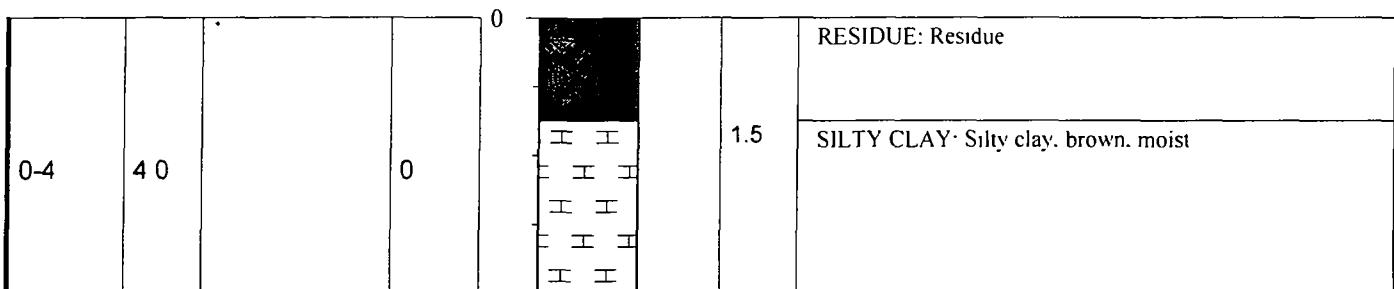
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 07/15/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 694647.9, N 908105.2

GROUND SURFACE ELEVATION: 619.51

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H		1.5	RESIDUE: Residue SILTY CLAY: Silty clay, brown, moist



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GEOLOGIC DRILL LOGBOREHOLE NO.: **A1-12**TOTAL DEPTH: **7 feet**

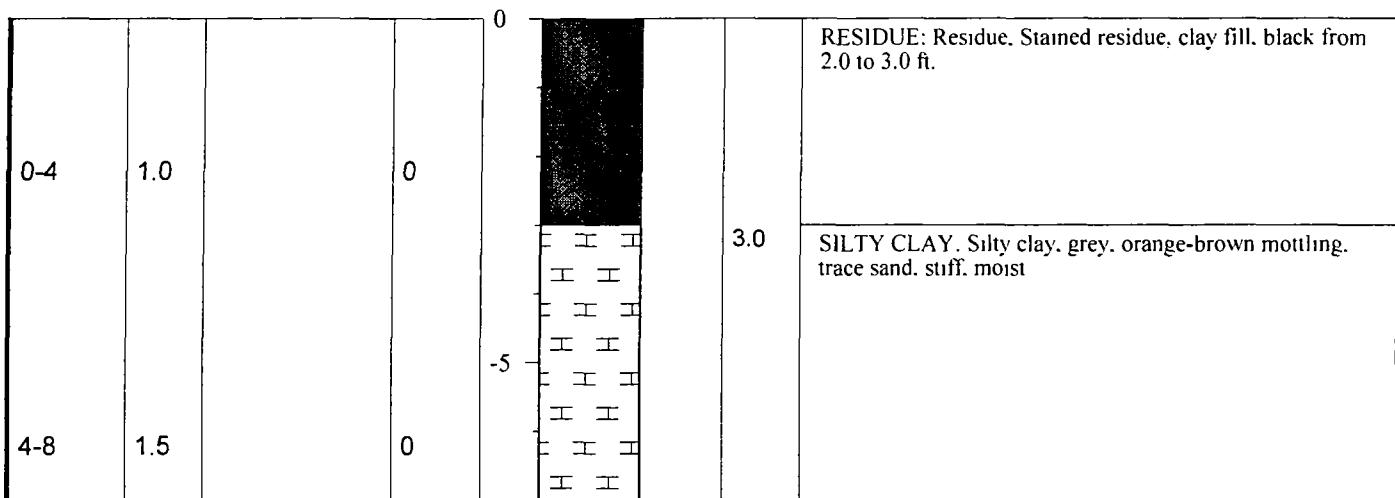
PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/15/02**

DRILLING CO.: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macrosampler**
HAMMER WT./DROP --

SURVEY LOCATION: E 694327.4 N 908126.8

GROUND SURFACE ELEVATION: 613.58'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-13

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/16/02	DRILLING CO : Philips RIG TYPE Direct Push METHOD OF DRILLING: Geoprobe SAMPLING METHODS: Macrosampler HAMMER WT./DROP --						
SURVEY LOCATION: E 694717.8 N 908069		GROUND SURFACE ELEVATION: 612.72'						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0								
0-4	4 0		0	0	H H H H H H H H H H H H H H H H		2 0	SILTY CLAY. Silty clay, grey mottling, some sand, moist

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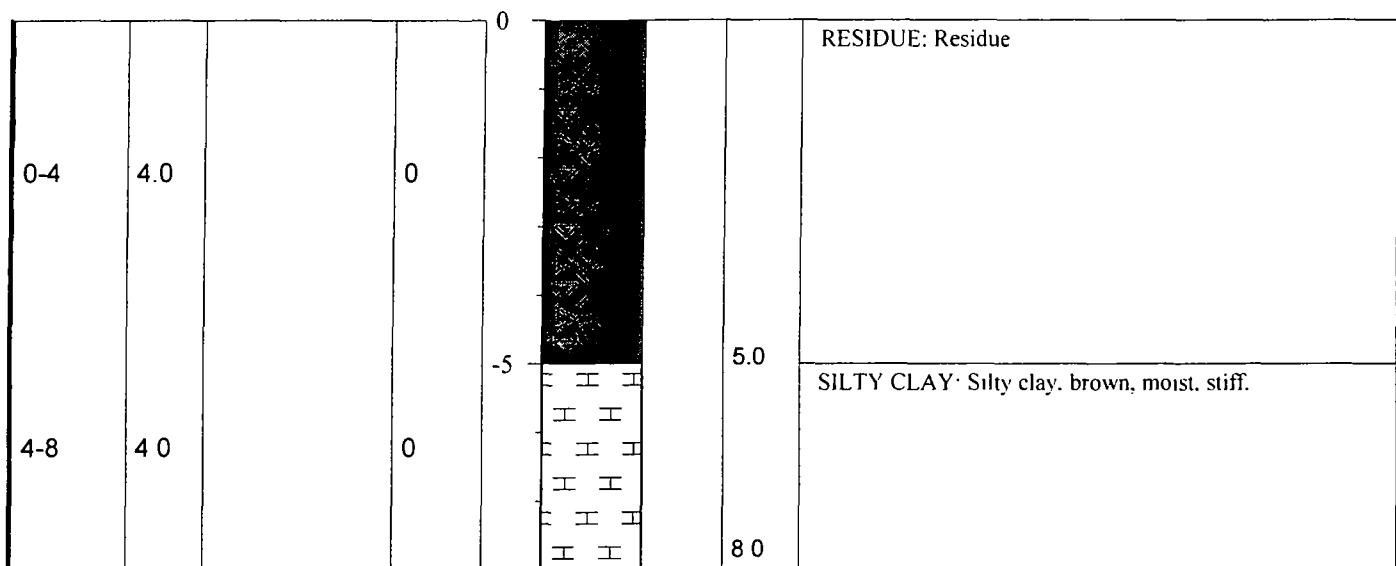
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-14

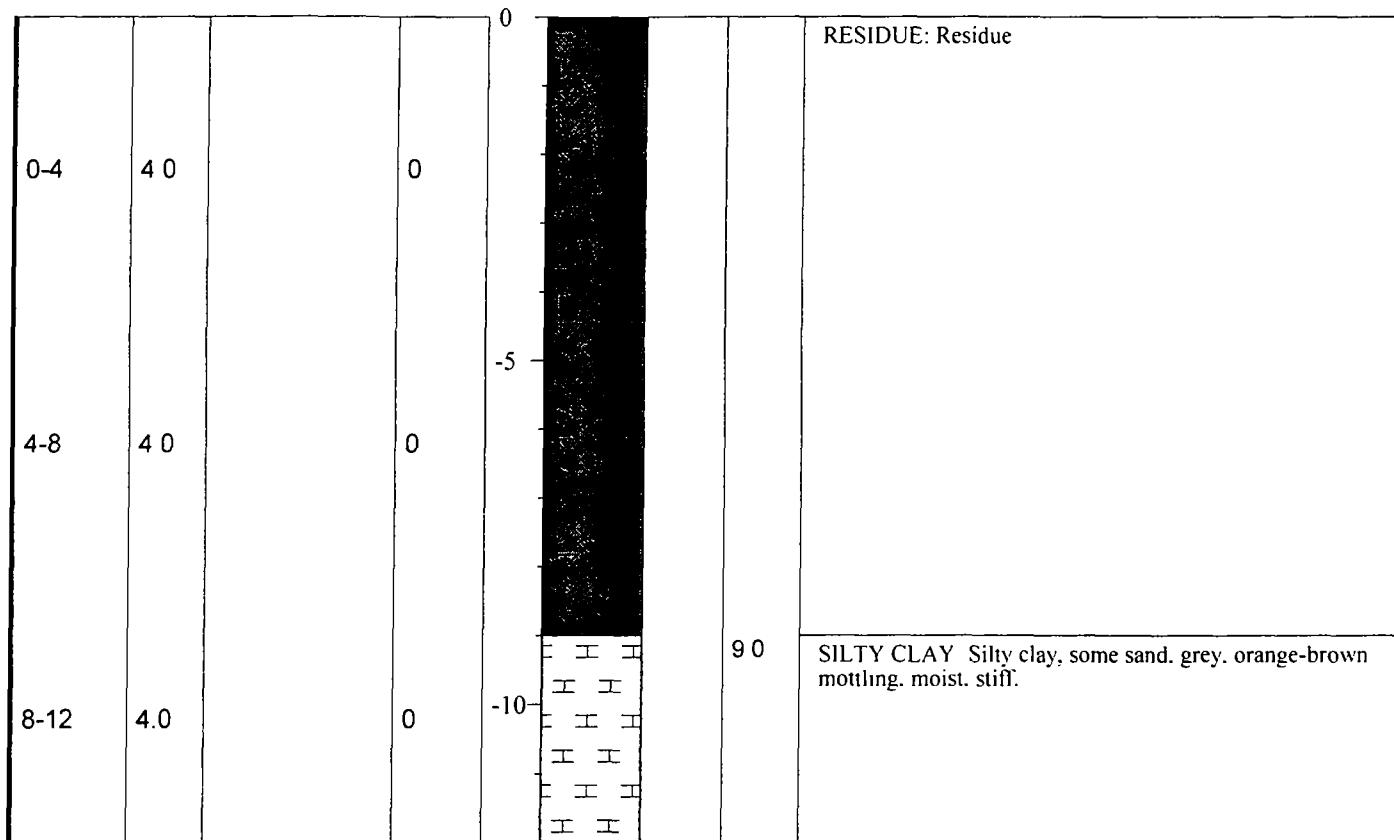
TOTAL DEPTH: 8.0

PROJECT	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED.	07/16/02	HAMMER WT./DROP	--					
SURVEY LOCATION: E 694597.8, N 908069		GROUND SURFACE ELEVATION: 620.18						
SSS INTERVAL (ft)	SSS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



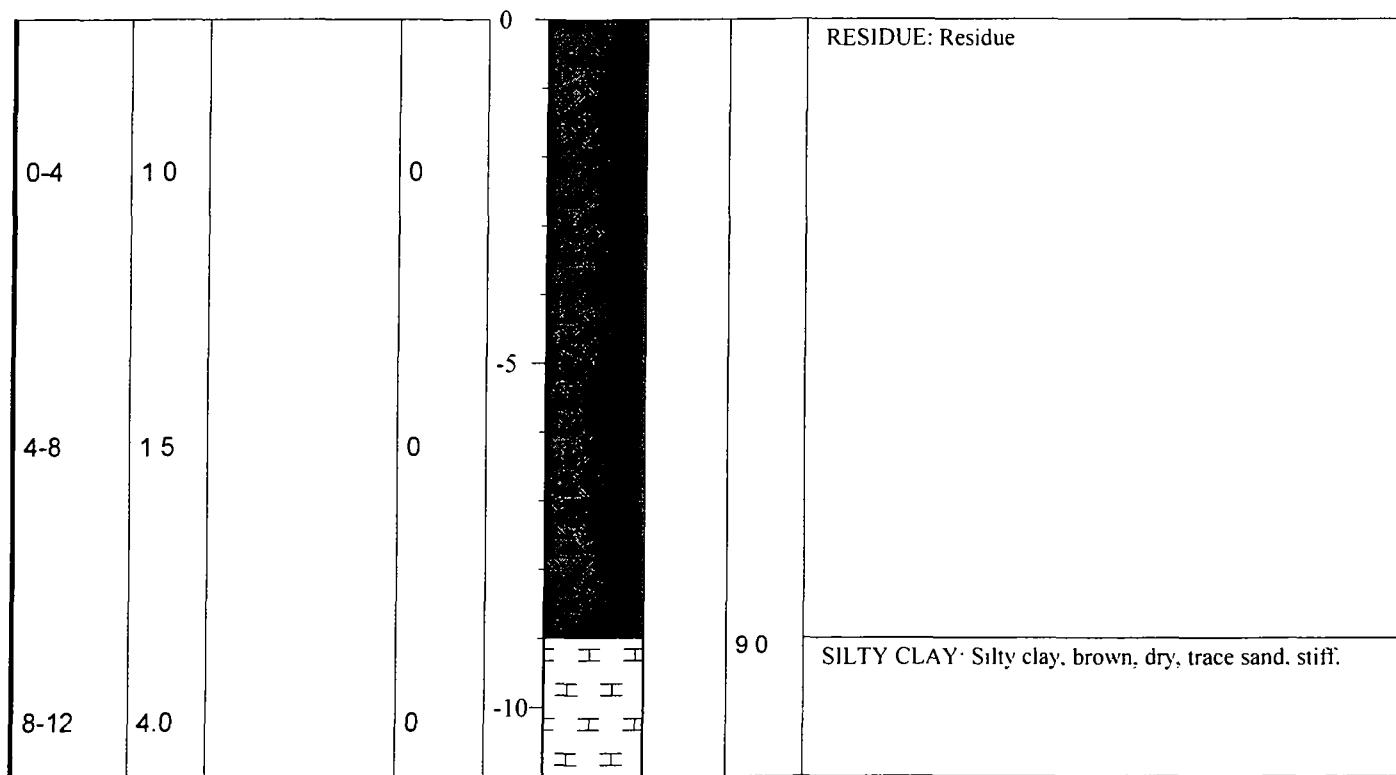
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-15****TOTAL DEPTH: 12.0**

PROJECT SITE LOCATION. JOB NO. LOGGED BY DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/16/02	DRILLING CO RIG TYPE: METHOD OF DRILLING SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 694507.8, N 908069		GROUND SURFACE ELEVATION: 616.86						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



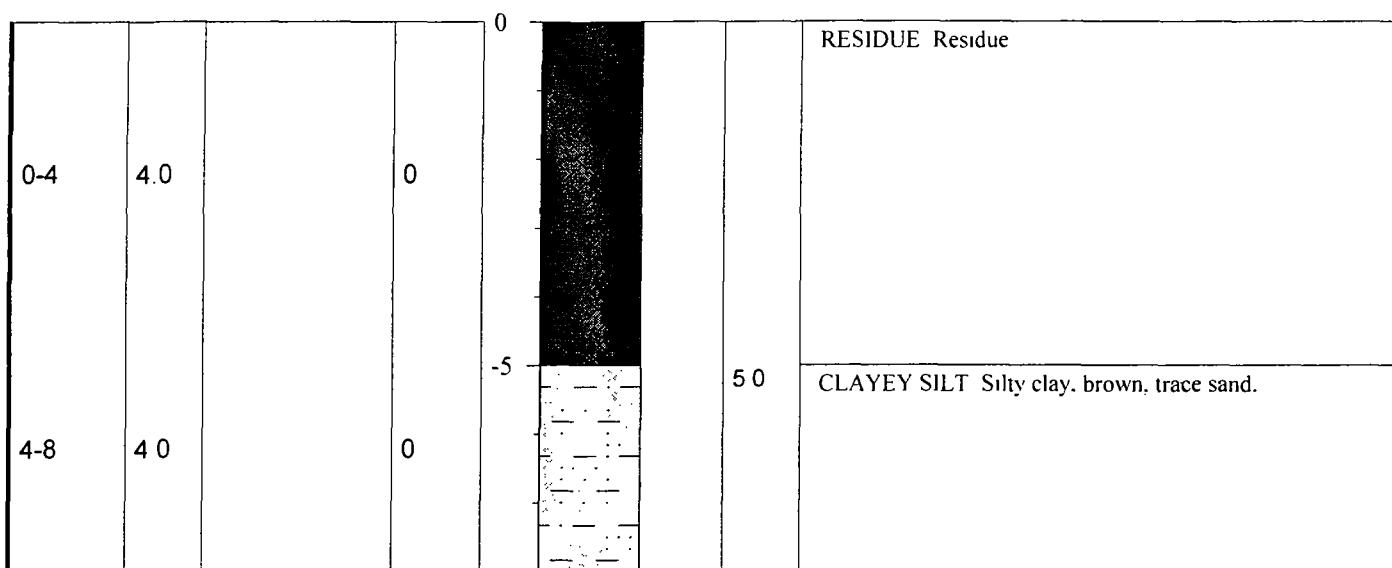
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-16****TOTAL DEPTH: 11 feet**

PROJECT: SITE LOCATION JOB NO.: LOGGED BY: DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/15/02	DRILLING CO. RIG TYPE METHOD OF DRILLING: SAMPLING METHODS. HAMMER WT./DROP	Philips Direct Push Geoprobe Macrosampler --	
SURVEY LOCATION: E 694267.8 N 908069		GROUND SURFACE ELEVATION 615.14'		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-17****TOTAL DEPTH: 8 feet**

PROJECT SITE LOCATION: JOB NO LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/15/02	DRILLING CO : RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION:	E 696094 N 908157.4 GROUND SURFACE ELEVATION: 625.28'							
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-18

TOTAL DEPTH: 28 feet

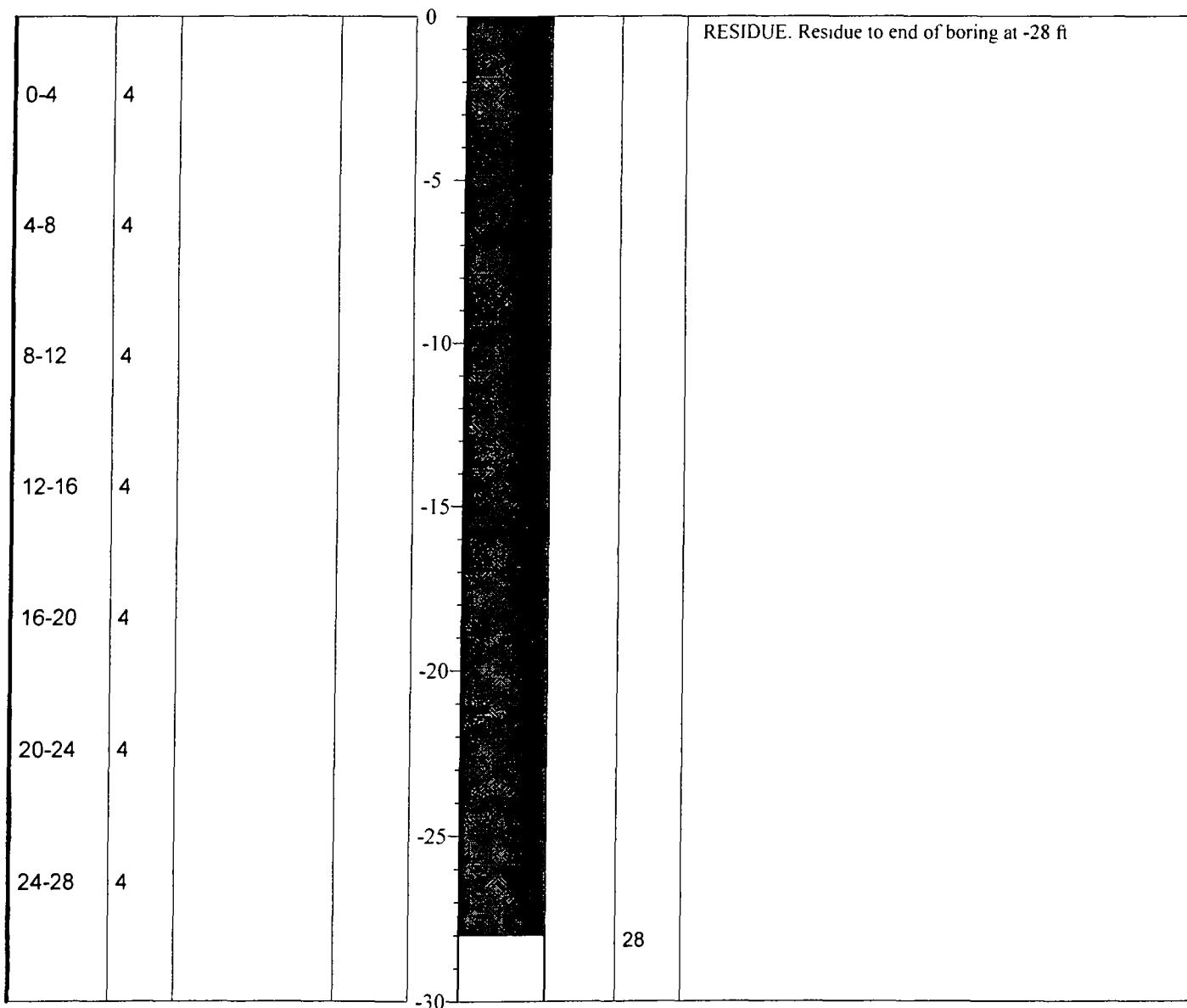
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/15/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macrosampler
HAMMER WT /DROP: --

SURVEY LOCATION: E693981.6 N908071.6

GROUND SURFACE ELEVATION:---

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-19

TOTAL DEPTH: 16 feet

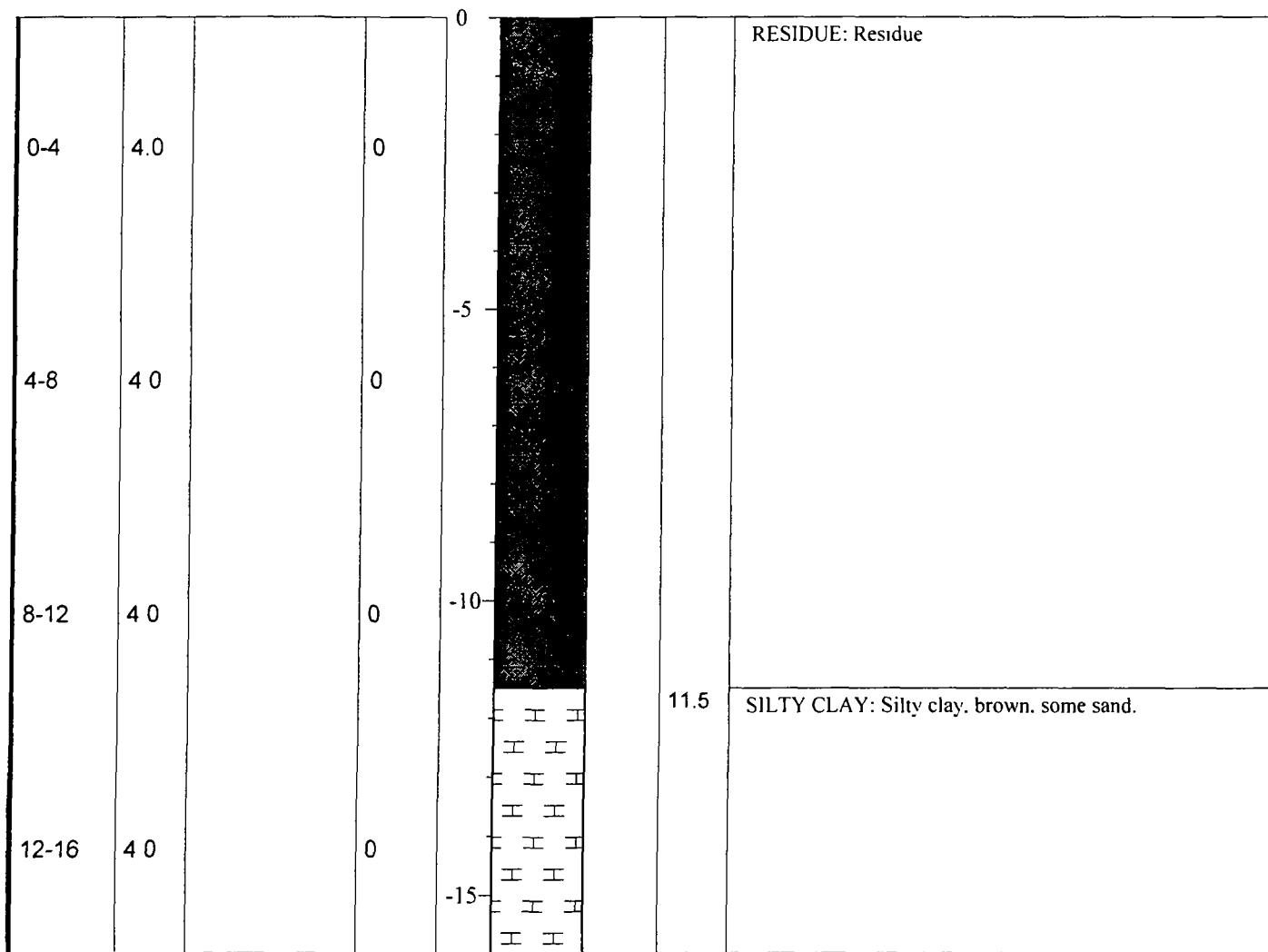
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/16/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 694396.5, N 908039.2

GROUND SURFACE ELEVATION: 618.23'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



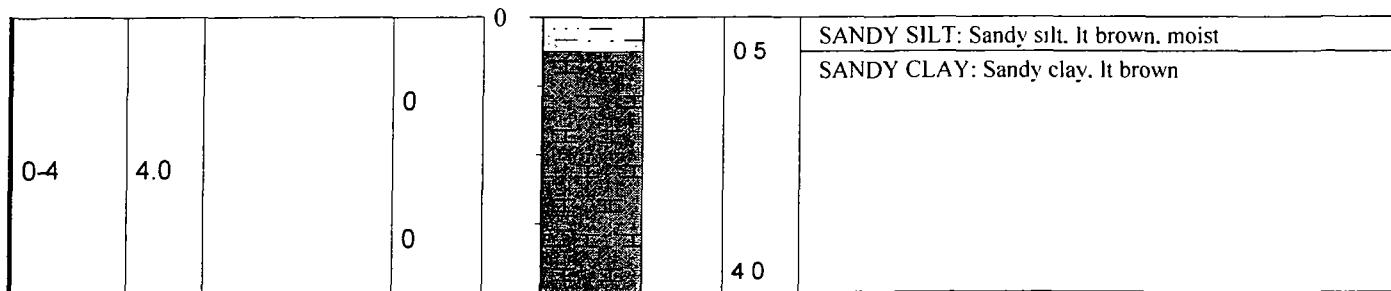
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-20****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **7/15/02**

DRILLING CO. **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macrosampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E694657.8 N908009**GROUND SURFACE ELEVATION: 611.39**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			0 5	SANDY SILT: Sandy silt. It brown, moist SANDY CLAY: Sandy clay. It brown



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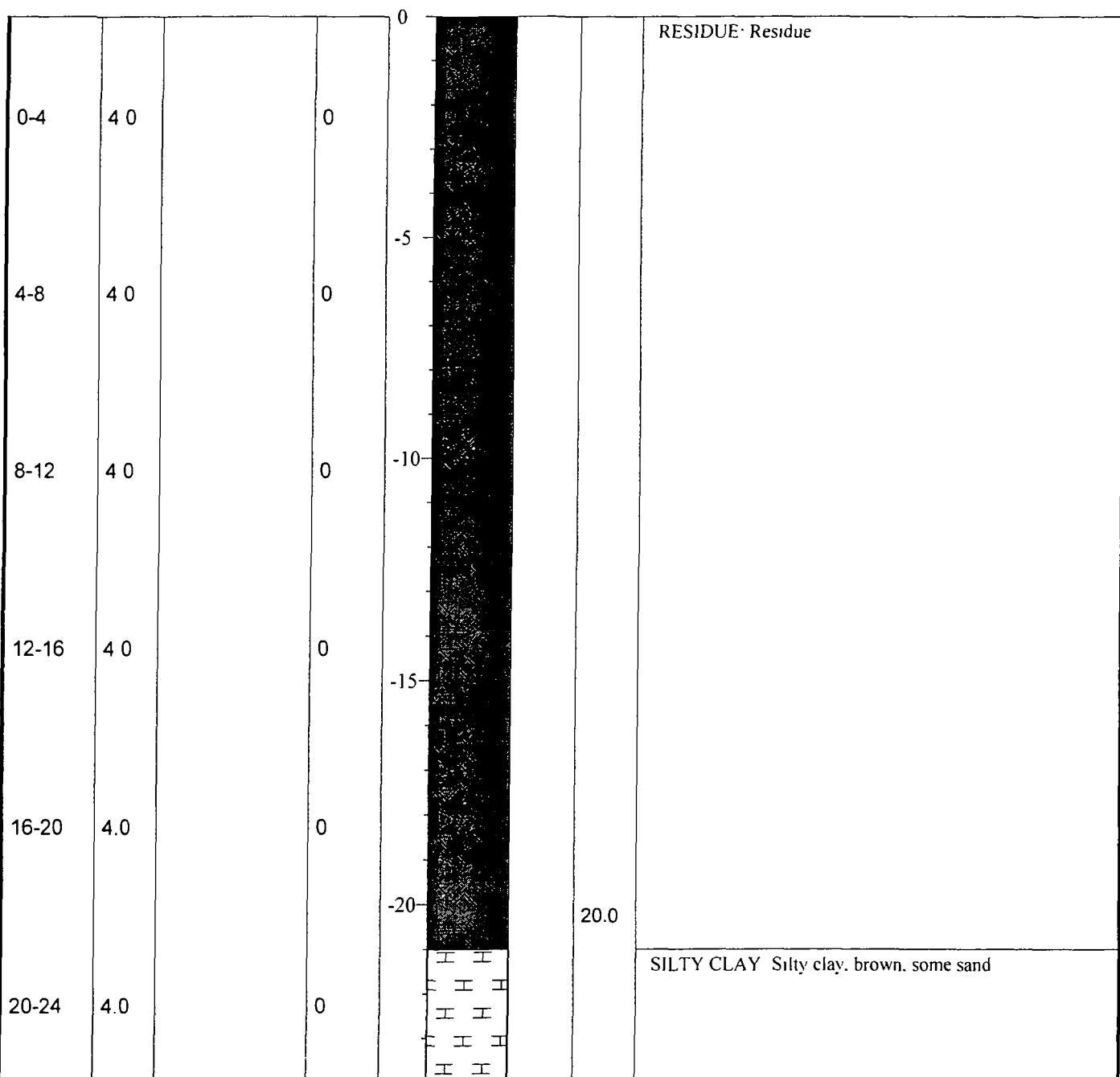
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-21

TOTAL DEPTH: 24 feet

PROJECT SITE LOCATION. JOB NO. LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/16/02	DRILLING CO RIG TYPE METHOD OF DRILLING: SAMPLING METHODS. HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 694298.4, N 908040.2		GROUND SURFACE ELEVATION: 611.47'						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



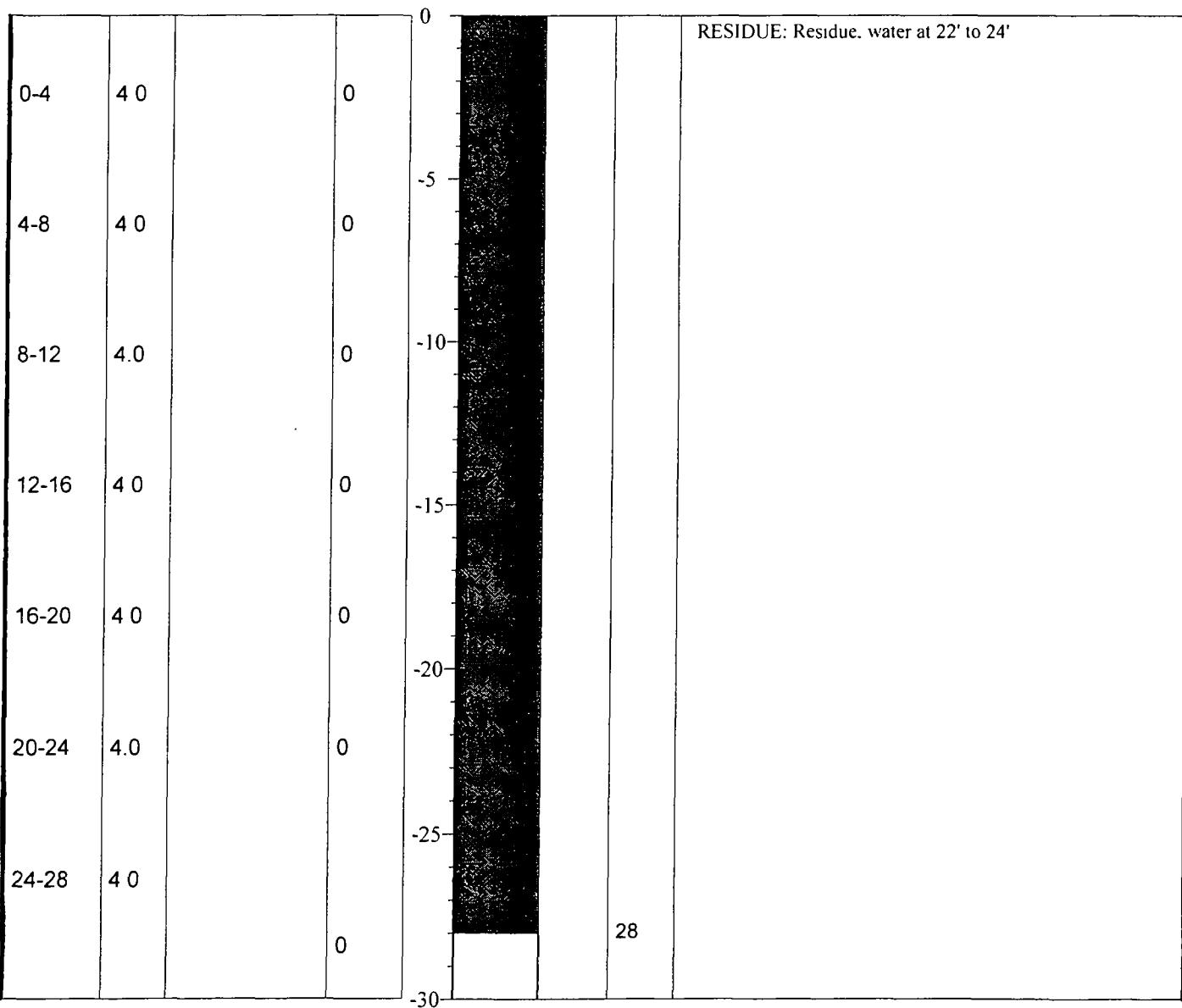
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-22****TOTAL DEPTH: 28 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/16/02**

DRILLING CO: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: E694207.8 N908009**GROUND SURFACE ELEVATION: 616.29**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-23

TOTAL DEPTH: 8 feet

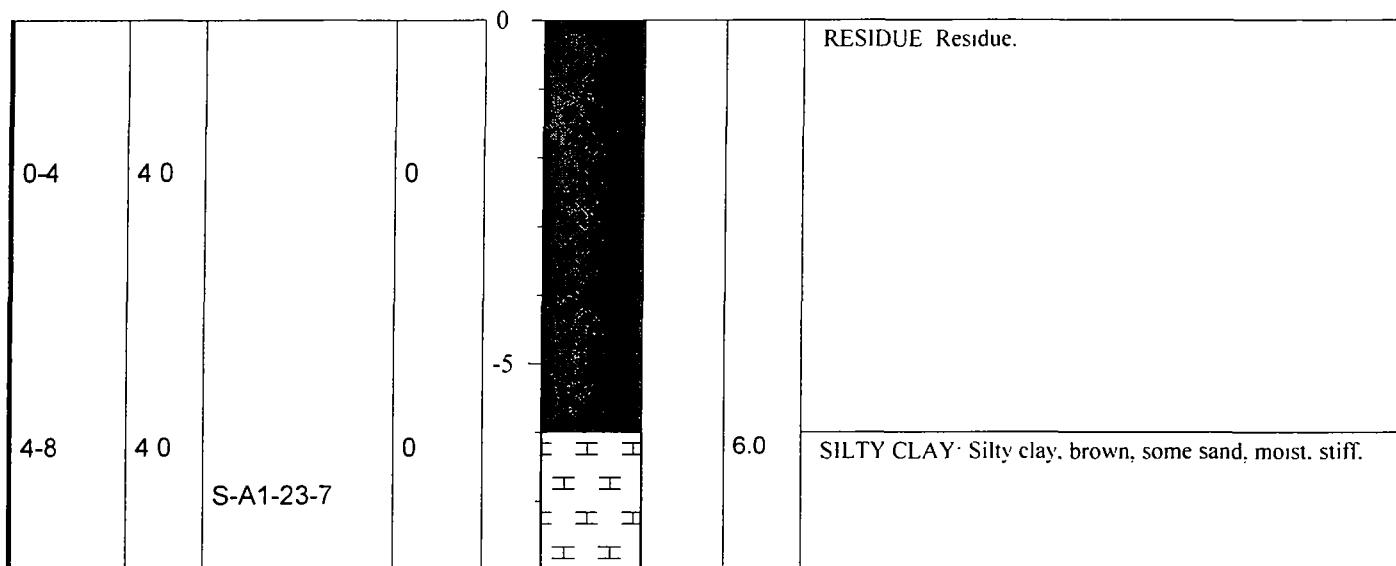
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED: 07/16/02

DRILLING CO Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 694035, N 908058.4

GROUND SURFACE ELEVATION: 607.29'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A1-24

TOTAL DEPTH: 12 feet

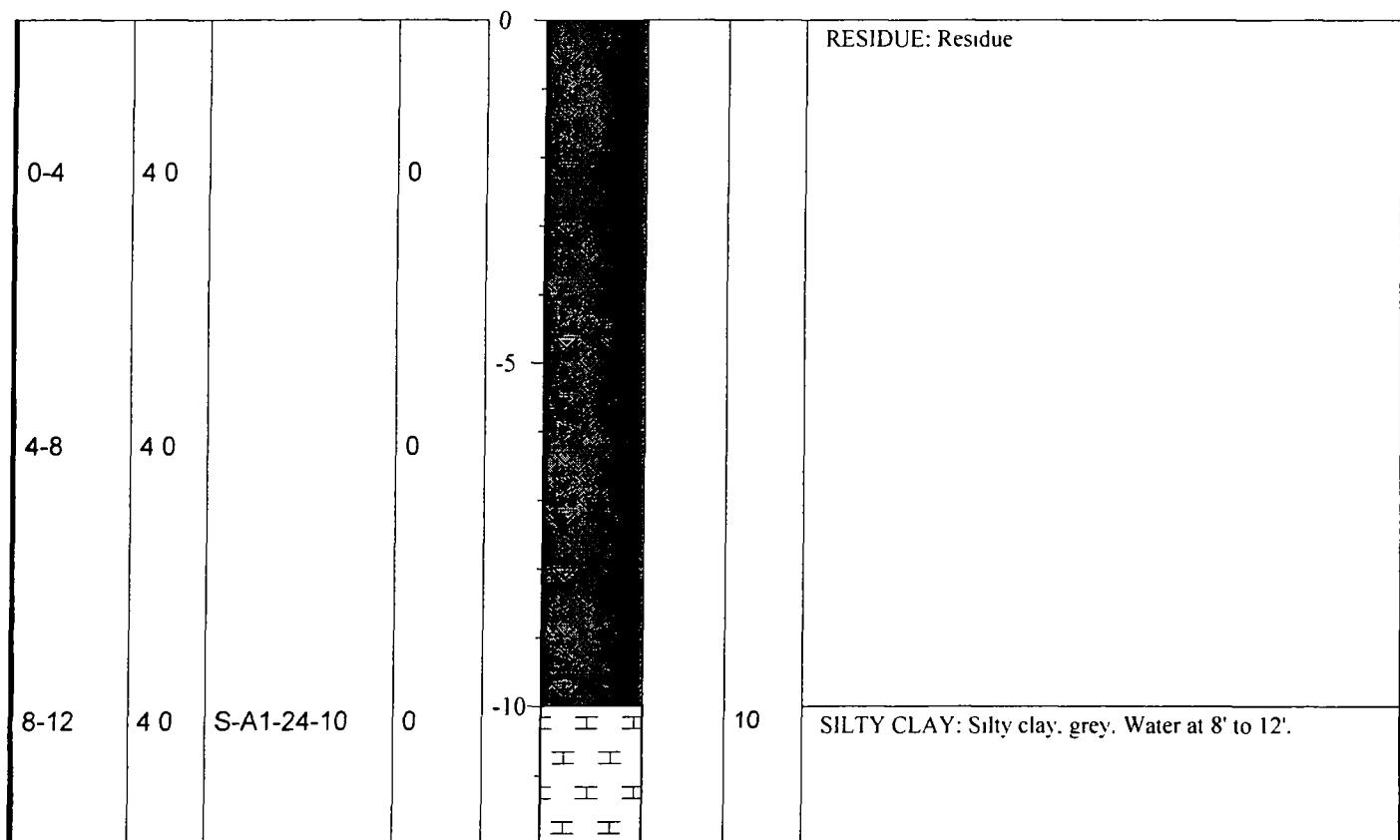
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/16/02

DRILLING CO: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP: -

SURVEY LOCATION: E 694507.8, N 907979

GROUND SURFACE ELEVATION: 606.79'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4 0		0	0	-5		10	RESIDUE: Residue



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A1-25****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED: **07/16/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E 694760.7, N908248.3

GROUND SURFACE ELEVATION: 616.38'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H			SILTY CLAY Silty Clay, brown with orange-brown mottling, moist, stiff, some sand.

0-4	4.0		0	0	H H H H H H H H H H H H H H H H			SILTY CLAY Silty Clay, brown with orange-brown mottling, moist, stiff, some sand.
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-1

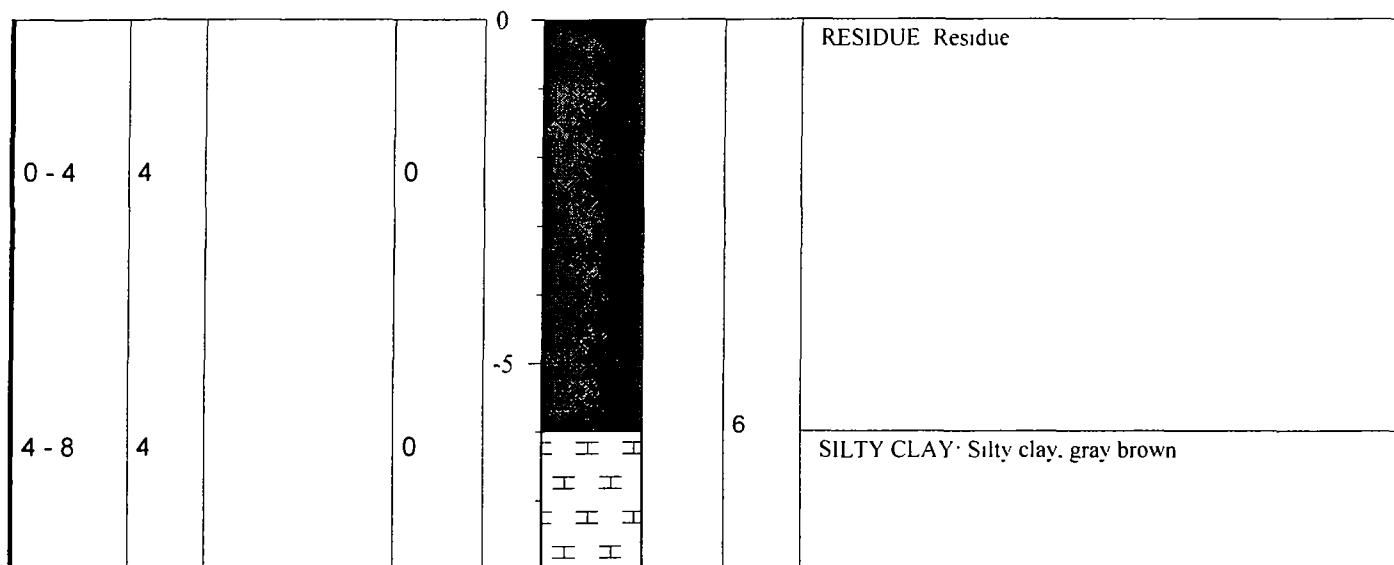
TOTAL DEPTH: 8 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION:	Hillsboro, IL	RIG TYPE.	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY.	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED	7/18/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 695284 N 908307.4

GROUND SURFACE ELEVATION: 628.69

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

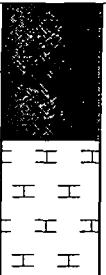


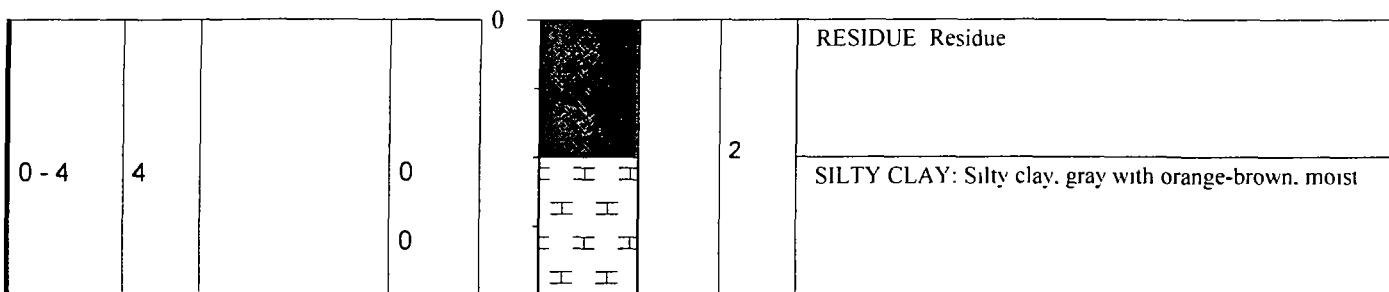
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A2-2****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY. **J. Fraser, C. Greco**
DATES DRILLED **7/18/02**

DRILLING CO. **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: **E 695584 N 908307.4**GROUND SURFACE ELEVATION: **629.92**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0			0 - 2	RESIDUE Residue SILTY CLAY: Silty clay, gray with orange-brown, moist



ENVIRON

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-3

TOTAL DEPTH: 4 feet

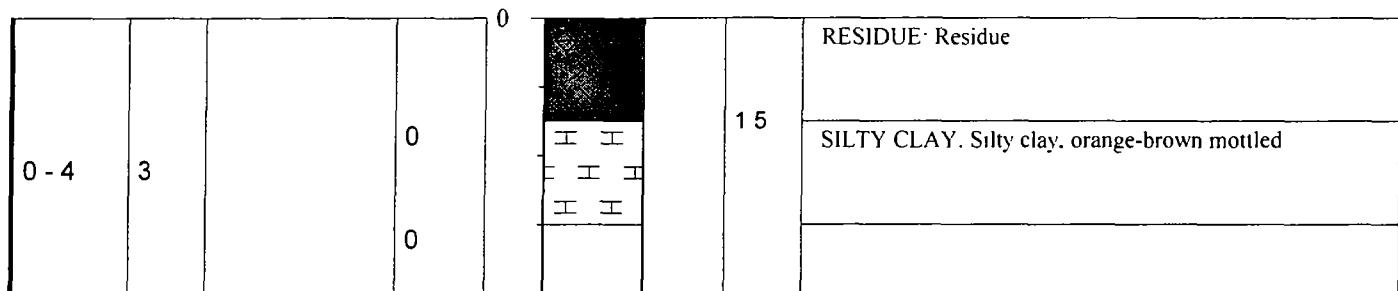
PROJECT. Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/18/02

DRILLING CO . Philips
RIG TYPE. Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695704 N 908307.4

GROUND SURFACE ELEVATION: 631.11

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	3		0	0				



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-4

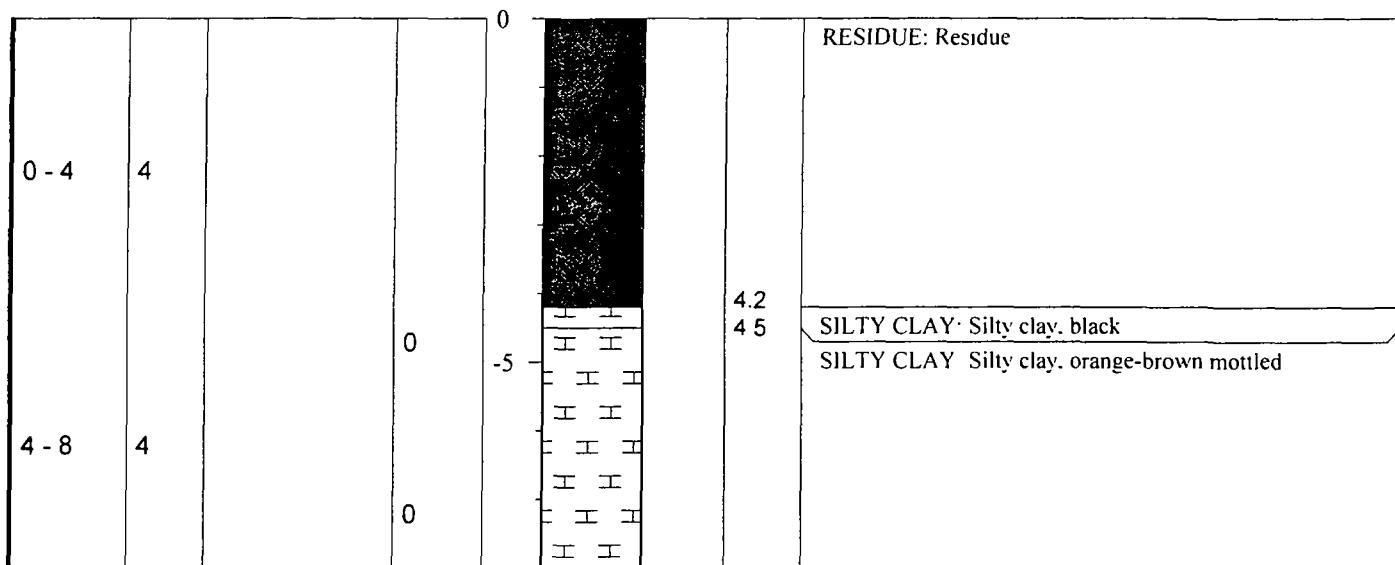
TOTAL DEPTH: 8 feet

PROJECT	Eagle Zinc	DRILLING CO.:	Philips
SITE LOCATION.	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO.:	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED	7/18/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 695824 N908307.4

GROUND SURFACE ELEVATION: 631.41

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

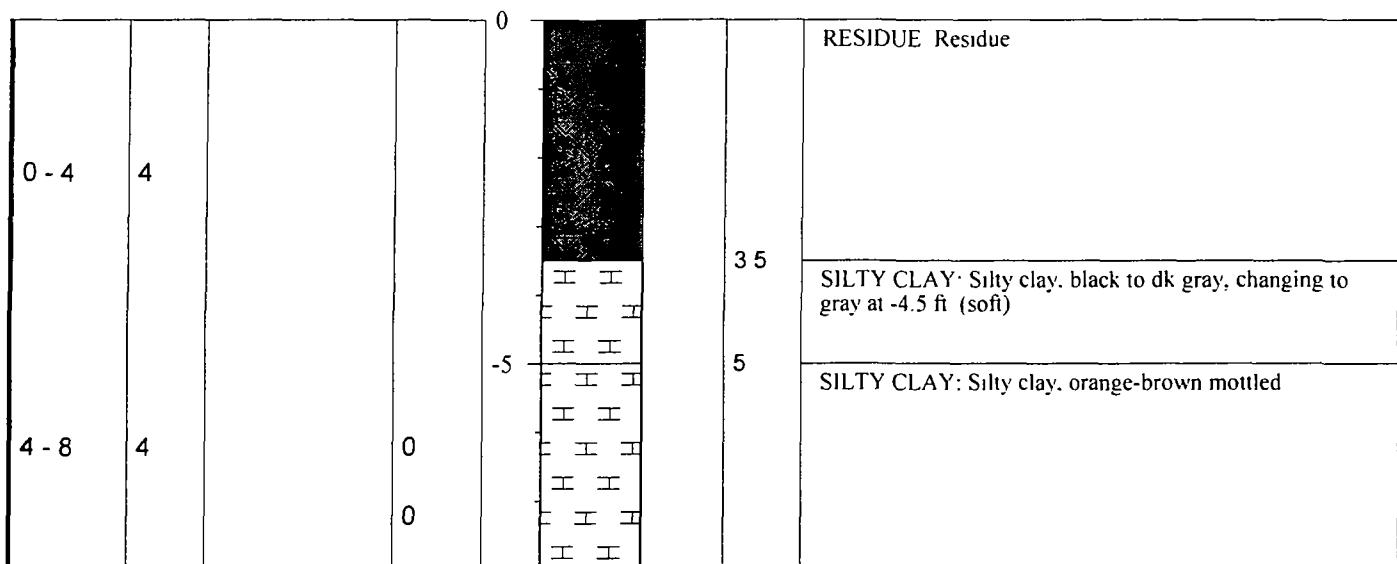
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-5

TOTAL DEPTH: 8 feet

PROJECT:	Eagle Zinc	DRILLING CO :	Philips					
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.:	21-7400E	METHOD OF DRILLING:	Geoprobe					
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED:	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E 695374 N 908307.4		GROUND SURFACE ELEVATION: 629.22						
SSS INTERVAL (ft)	SSS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

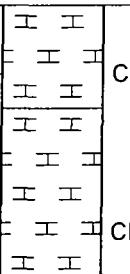
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-6

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO.: Philips RIG TYPE: Direct Push METHOD OF DRILLING: Geoprobe SAMPLING METHODS: Macro-core Sampler HAMMER WT./DROP --
SURVEY LOCATION: E 696179.3 N 908307.9		GROUND SURFACE ELEVATION: 627.56
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION

0 - 4	4		0	0	0		1 5	SILTY CLAY: Silty clay, partly organic, dk brown SILTY CLAY: Silty clay, trace sand, brown, moist
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ENVIRON

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-7

TOTAL DEPTH: 4 feet

PROJECT. SITE LOCATION JOB NO.: LOGGED BY. DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO. RIG TYPE: METHOD OF DRILLING SAMPLING METHODS. HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 696304 N 908277.4		GROUND SURFACE ELEVATION: 623.85						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4	S-A2-7-3*	0 0	0	H H H H H H H H H H H H H H H H H H H H	0.5 1	RESIDUE: Residue SILTY CLAY: Silty clay, black SILTY CLAY: Silty clay, brown mottled, moist
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ENVIRON

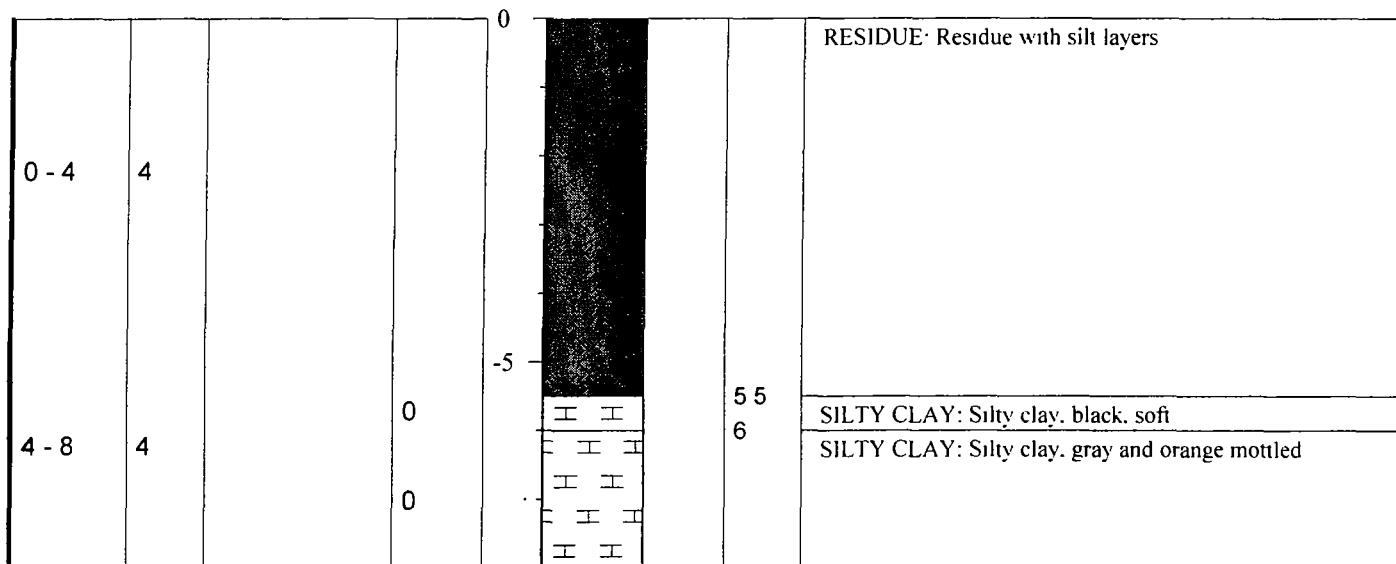
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-8

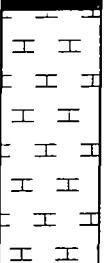
TOTAL DEPTH: 8 feet

PROJECT: SITE LOCATION JOB NO.. LOGGED BY: DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO.. RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION: E 695164 N 908247.4		GROUND SURFACE ELEVATION: 628.68	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A2-9****TOTAL DEPTH: 4 feet**

PROJECT SITE LOCATION: JOB NO LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO.. RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 695494 N 908217.4		GROUND SURFACE ELEVATION: 626.61						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0			0.2	<u>RESIDUE.</u> Residue SILTY CLAY Silty clay, brown and orange mottled
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-10

TOTAL DEPTH: 4 feet

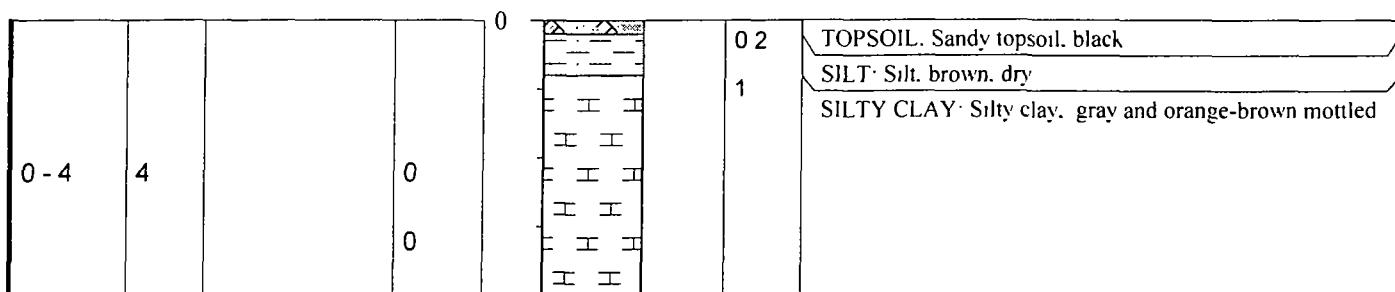
PROJECT. Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/18/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695644 N 908217.4

GROUND SURFACE ELEVATION: 629.1

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0 0	0	H H H H H H H H H H H H H H		0 2 1	TOPSOIL. Sandy topsoil. black SILT. Silt. brown. dry SILTY CLAY. Silty clay. gray and orange-brown mottled



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **A2-11**TOTAL DEPTH: **4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED **7/18/02**

DRILLING CO. **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: **E 695704 N 908217.4**GROUND SURFACE ELEVATION: **630.41**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				

0								
0 - 4	4		0	0				

0 1 2

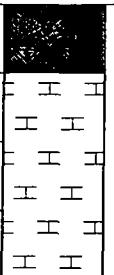
RESIDUE. Residue

SILTY CLAY: Silty clay, black and brown

SILTY CLAY: Silty clay, trace sand, gray and orange-brown mottled

ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A2-12****TOTAL DEPTH: 4 feet**

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED.	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION: E 696064 N 908217.4		GROUND SURFACE ELEVATION: 624.7	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION

0 - 4	4		0 0	0  1	RESIDUE: Residue SILTY CLAY Silty clay, brown, slightly mottled
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-13

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO..	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED.	7/18/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 695944 N 908187.4

GROUND SURFACE ELEVATION: 625.69

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0	H H H H H H H H H H H H H H		0.5	RESIDUE Residue

0 - 4	4		0	0	H H H H H H H H H H H H H H		0.5	RESIDUE Residue
							1	CLAYEY SILT: Clayey silt, gray (dry)
								SILTY CLAY Silty clay, brown mottled

ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-14

TOTAL DEPTH: 8 feet

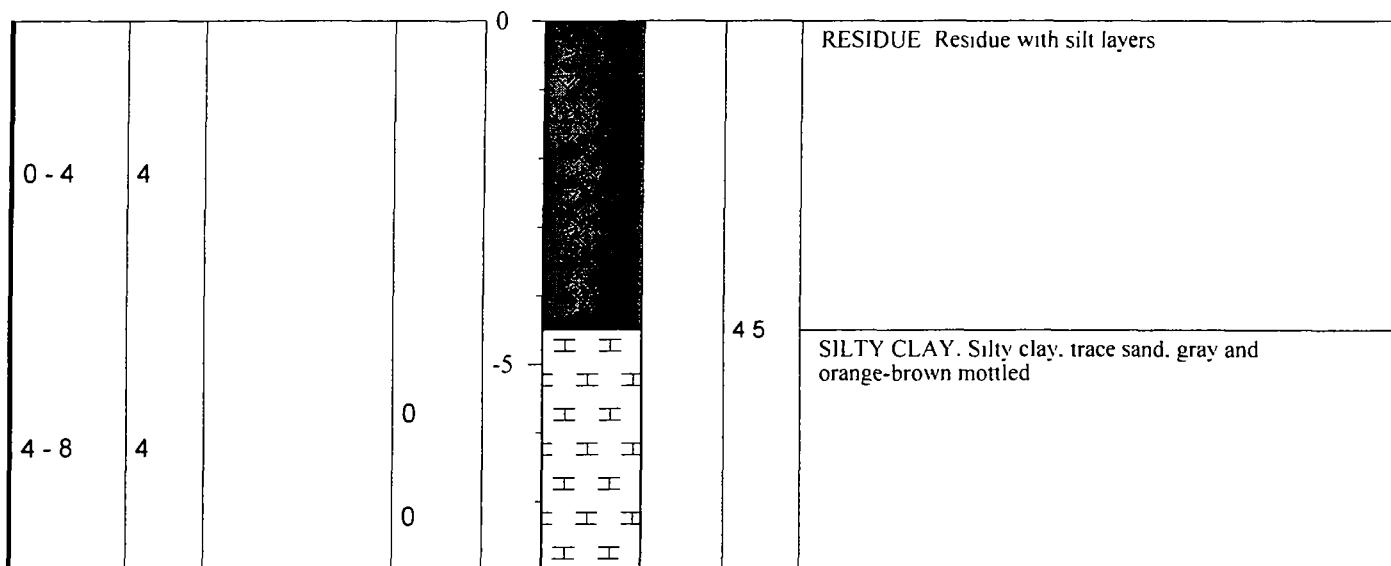
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 7/18/02

DRILLING CO.. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS. Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695944 N 908157.4

GROUND SURFACE ELEVATION: 625.21

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4			0			0 - 4	RESIDUE Residue with silt layers
4 - 8	4			0			4 - 8	SILTY CLAY. Silty clay, trace sand, gray and orange-brown mottled



ENVIRON

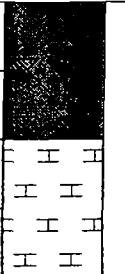
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-15

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E 695404 N908157.4		GROUND SURFACE ELEVATION: 626.07						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4	S-A2-15-3	0	0	0		2	RESIDUE: Residue
								SILTY CLAY. Silty clay, some sand, brown mottled, moist

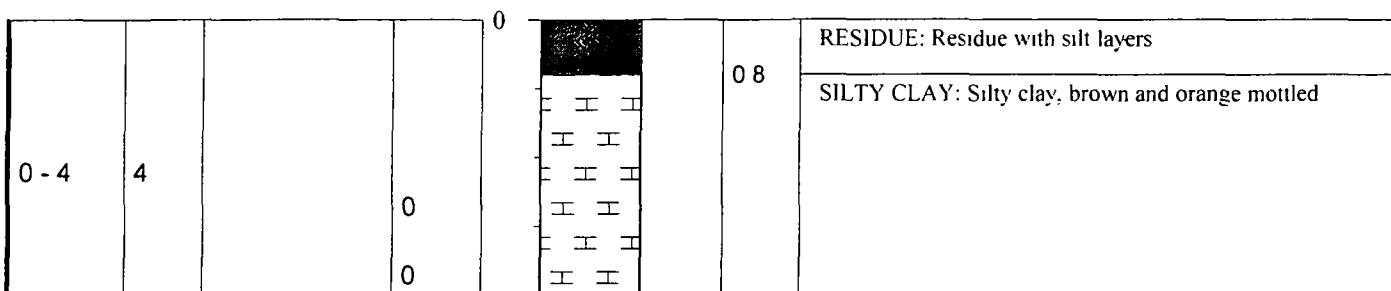
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A2-16****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION. **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED: **7/18/02**

DRILLING CO. **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING. **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E 695584 N 908178.4**GROUND SURFACE ELEVATION: 631.23**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0			0 8	RESIDUE: Residue with silt layers SILTY CLAY: Silty clay, brown and orange mottled



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **A2-17**TOTAL DEPTH: **4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **7/18/02**

DRILLING CO: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: **E 696094 N 908157.4**GROUND SURFACE ELEVATION: **625.28**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0	H H		0.5	SILTY CLAY. Silty clay, partly organic, dk brown SILTY CLAY. Silty clay, olive brown, slightly mottled

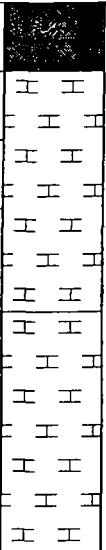
0 - 4	4		0	0	H H		0.5	SILTY CLAY. Silty clay, partly organic, dk brown SILTY CLAY. Silty clay, olive brown, slightly mottled
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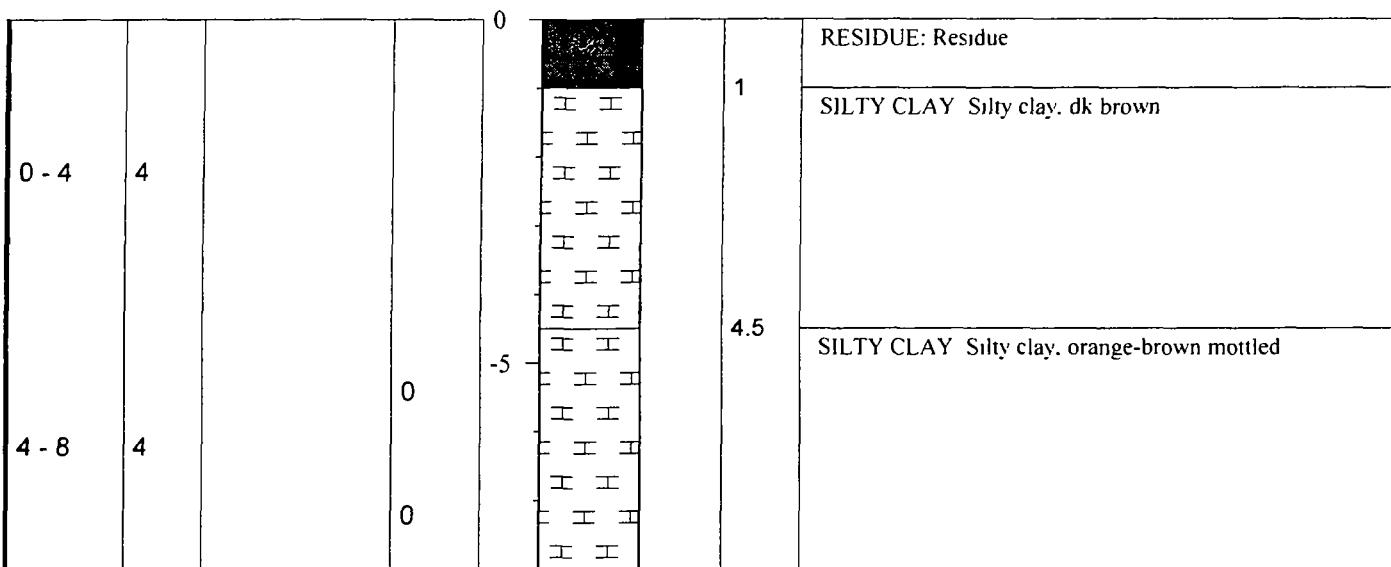
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A2-18****TOTAL DEPTH: 8 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED: **7/18/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E 695254 N 908127.4**GROUND SURFACE ELEVATION: 623.18**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4			0			0 - 4.5	RESIDUE: Residue
4 - 8	4			0			4.5 - 8	SILTY CLAY Silty clay. dk brown



ENVIRON

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG**BOREHOLE NO.: A2-19****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **7/18/02**

DRILLING CO.: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP: **--**

SURVEY LOCATION: **E 695164 N 908097.4**GROUND SURFACE ELEVATION: **623.91**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				

0							0.5	RESIDUE. Residue
								SILTY CLAY Silty clay, gray

0							3	SILTY CLAY: Silty clay, orange-brown mottled
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ENVIRON

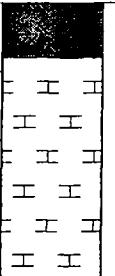
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-20

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION. JOB NO. LOGGED BY DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 695830.9 N908163		GROUND SURFACE ELEVATION: 629.14						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0		.8	RESIDUE Residue
							SILTY CLAY Silty clay. orange-brown mottled

ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-21

TOTAL DEPTH: 4 feet

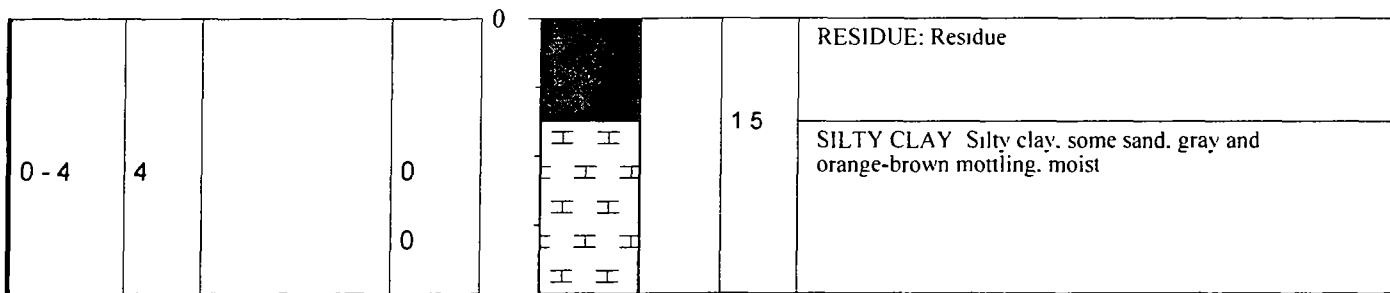
PROJECT. Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO : 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED: 7/18/02

DRILLING CO. Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695434 N 908067.4

GROUND SURFACE ELEVATION: 625.18

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				



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GEOLOGIC DRILL LOG

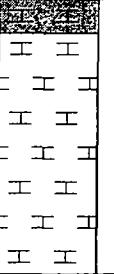
BOREHOLE NO.: A2-22

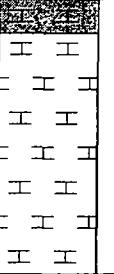
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO :	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED.	7/18/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 695524 N 908081.7

GROUND SURFACE ELEVATION: 624.3

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0			0 5	SANDY CLAY Sandy clay, brown SILTY CLAY Silty clay, gray and orange-brown mottled

0 - 4	4		0	0			0 5	SANDY CLAY Sandy clay, brown SILTY CLAY Silty clay, gray and orange-brown mottled
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ENVIRON

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GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-23

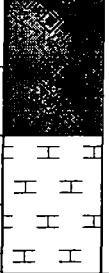
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION.	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	7/18/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 695194 N 908007.4

GROUND SURFACE ELEVATION: 620.81

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A2-23-3	0 0	0			2	RESIDUE: Residue SILTY CLAY Silty clay, brown mottled

0 - 4	4	S-A2-23-3	0 0	0			2	RESIDUE: Residue SILTY CLAY Silty clay, brown mottled
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-24

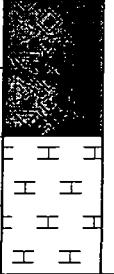
TOTAL DEPTH: 4 feet

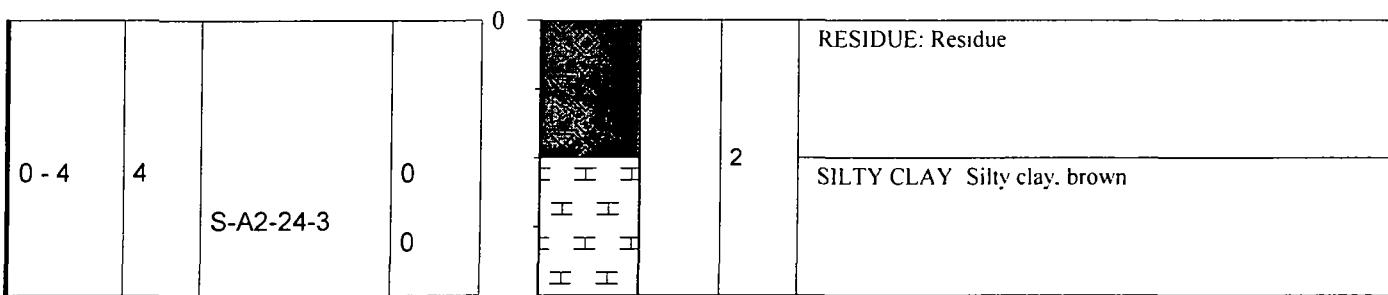
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 7/18/02

DRILLING CO.. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 695254 N 908004.3

GROUND SURFACE ELEVATION: 622.26

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A2-24-3	0 0	0			0 - 2	RESIDUE: Residue SILTY CLAY Silty clay, brown



ENVIRON

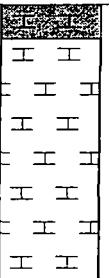
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A2-25

TOTAL DEPTH: 4 feet

PROJECT. SITE LOCATION: JOB NO LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO RIG TYPE METHOD OF DRILLING SAMPLING METHODS: HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION:	E 695345 N 908028.9 GROUND SURFACE ELEVATION: 623.6							
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0			0.5	SANDY CLAY Sandy clay, brown SILTY CLAY Silty clay, gray
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-1

TOTAL DEPTH: 4 feet

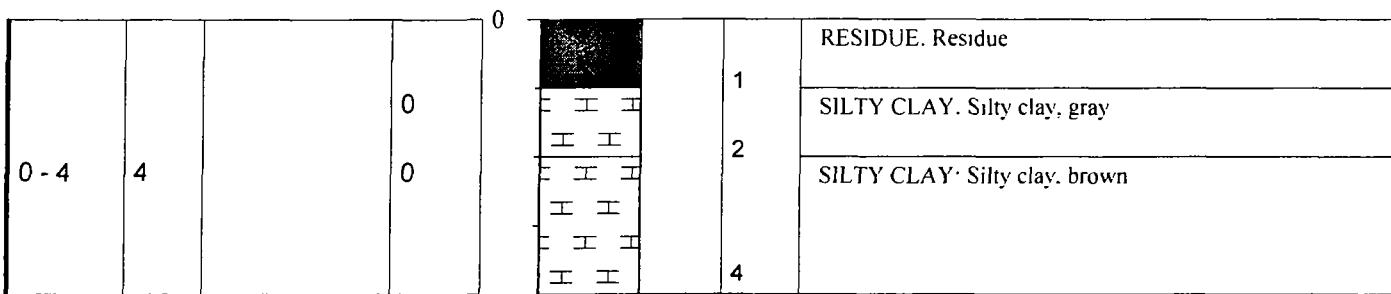
PROJECT: Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY. J. Fraser, C. Greco
DATES DRILLED: 7/19/02

DRILLING CO : Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695636.4 N909366.7

GROUND SURFACE ELEVATION: 632.35

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0	H H H H H H H H H H H H H H H H		0 1 2 4	RESIDUE. Residue SILTY CLAY. Silty clay, gray SILTY CLAY. Silty clay, brown

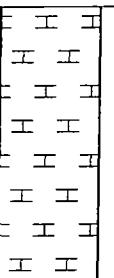


ENVIRON740 Waukegan Rd., Suite 401
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BOREHOLE NO.: A3-2

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	7/18/02	HAMMER WT./DROP	--					
SURVEY LOCATION: E695342.4 N909326.7		GROUND SURFACE ELEVATION: 625.65						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0			4	SILTY CLAY Silty clay, brown to gray
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ENVIRON

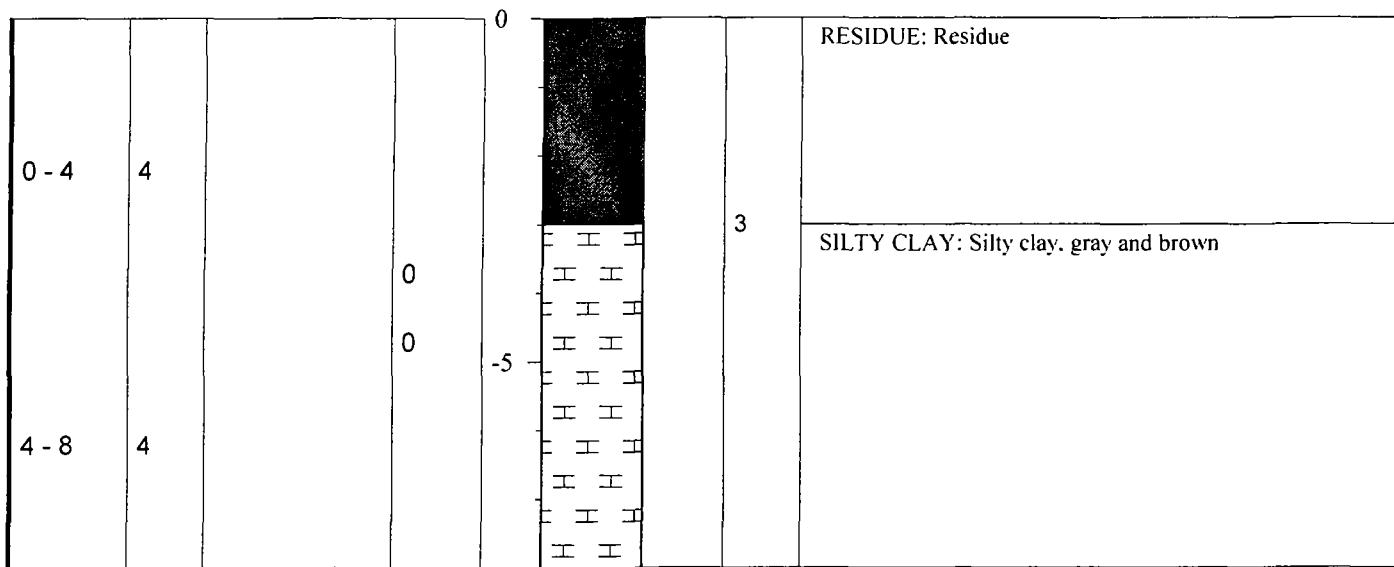
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-3

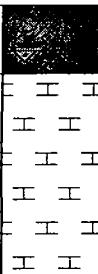
TOTAL DEPTH: 8 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/19/02	DRILLING CO.: RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E695546.4 N909326.5		GROUND SURFACE ELEVATION: 631.0						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A3-4****TOTAL DEPTH: 4 feet**

PROJECT SITE LOCATION: JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO.: Philips RIG TYPE: Direct Push METHOD OF DRILLING: Geoprobe SAMPLING METHODS: Macro-core Sampler HAMMER WT /DROP: --						
SURVEY LOCATION:	E696422.4 N909286.7 GROUND SURFACE ELEVATION: 629.04							
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0		1	RESIDUE: Residue SILTY CLAY: Silty clay, brown
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ENVIRON

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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-5

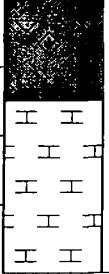
TOTAL DEPTH: 4 feet

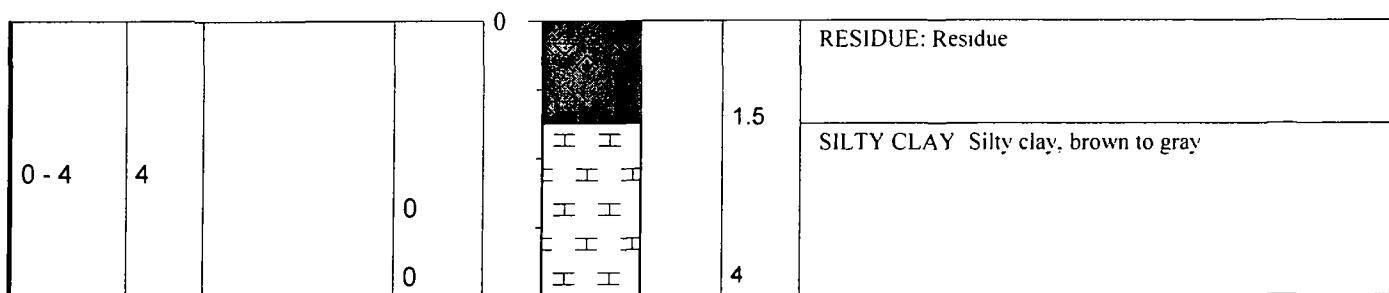
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/19/02

DRILLING CO Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E695582.4 N909286.7

GROUND SURFACE ELEVATION: 631.51

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0			0 - 1.5	RESIDUE: Residue



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740 Waukegan Rd., Suite 401
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-6

TOTAL DEPTH: 4 feet

PROJECT. Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED: 7/18/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695342.4 N909246.7

GROUND SURFACE ELEVATION: 625.13

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0 0	0	H H H H H H H H H H H H H H H H H H H H		4	SILTY CLAY Silty clay, brown to gray

0 - 4	4		0 0	0	H H H H H H H H H H H H H H H H H H H H		4	SILTY CLAY Silty clay, brown to gray
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-7

TOTAL DEPTH: 12 feet

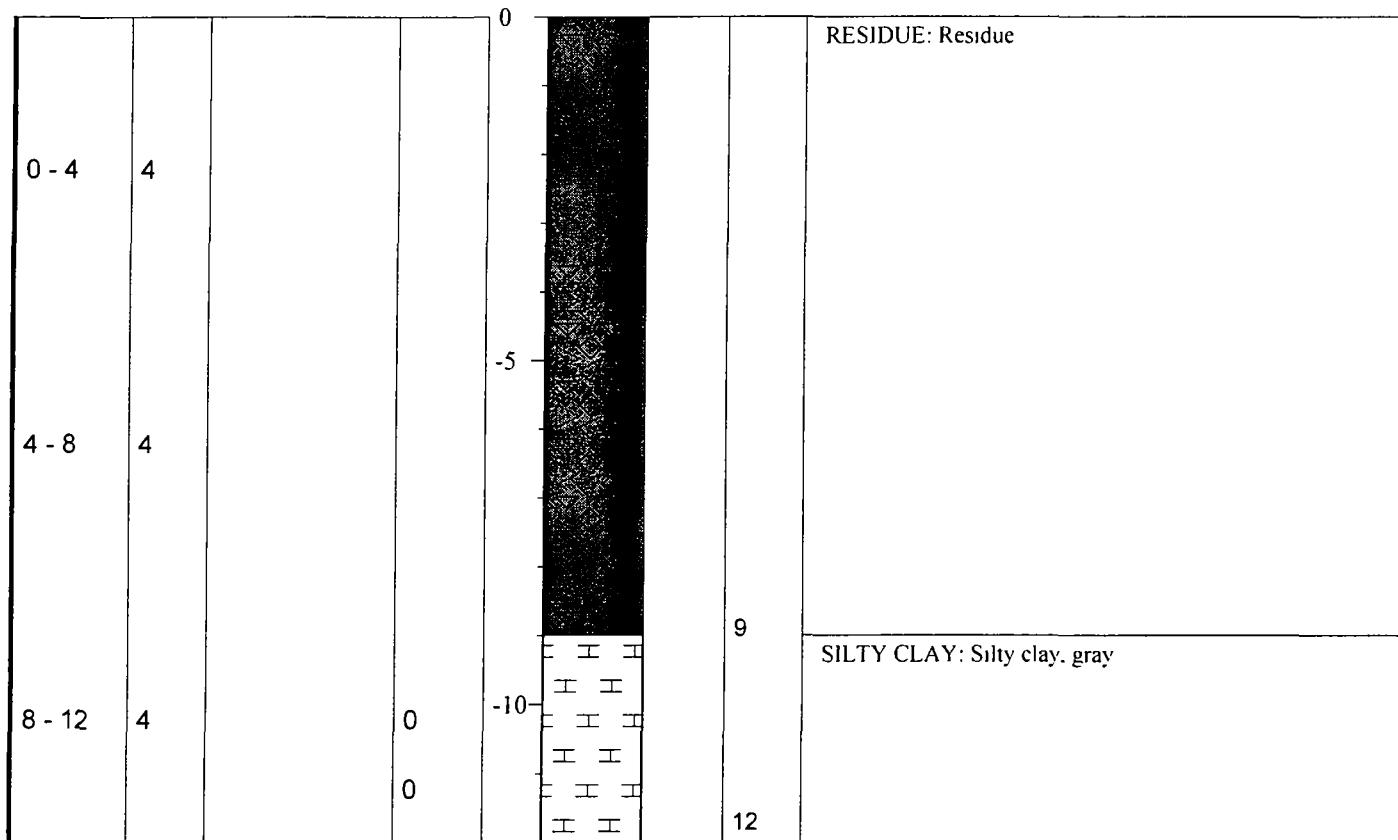
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 7/20/02

DRILLING CO.: Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E695357.1 N909193.5

GROUND SURFACE ELEVATION: ---

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

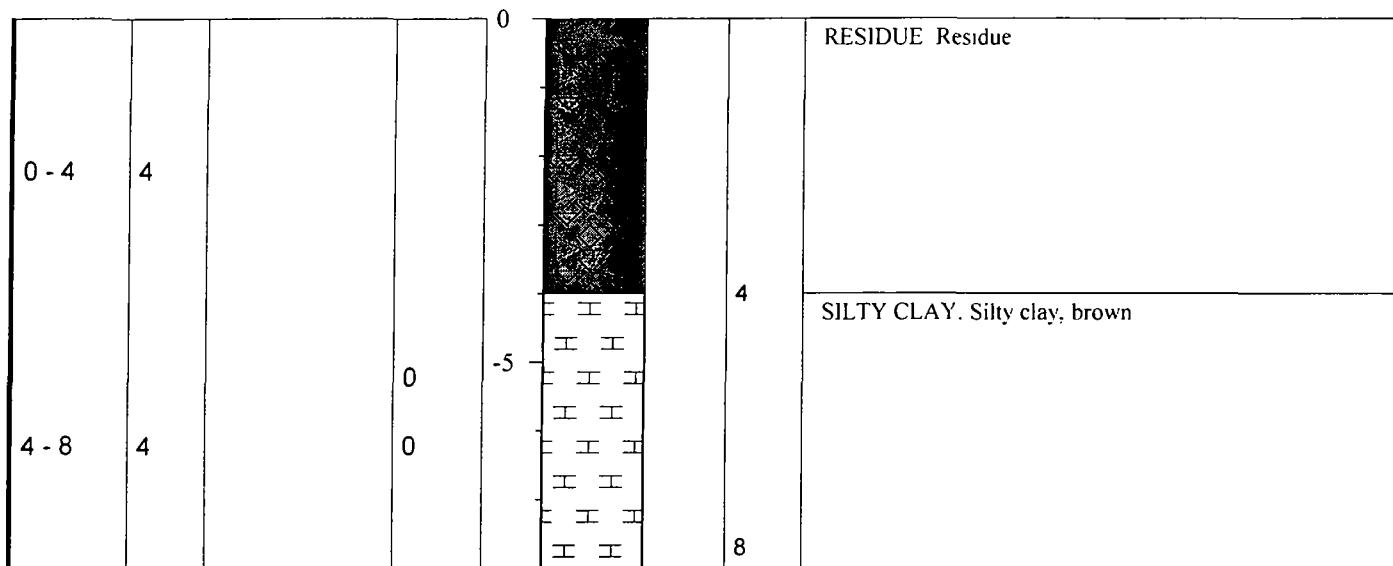
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-8

TOTAL DEPTH: 8 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED:	7/20/02	HAMMER WT /DROP	--
SURVEY LOCATION: E695462.4 N99206.7		GROUND SURFACE ELEVATION: 632.78	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	SOIL DESCRIPTION
PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS
LAYER DEPTH (ft)			



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-9

TOTAL DEPTH: 4 feet

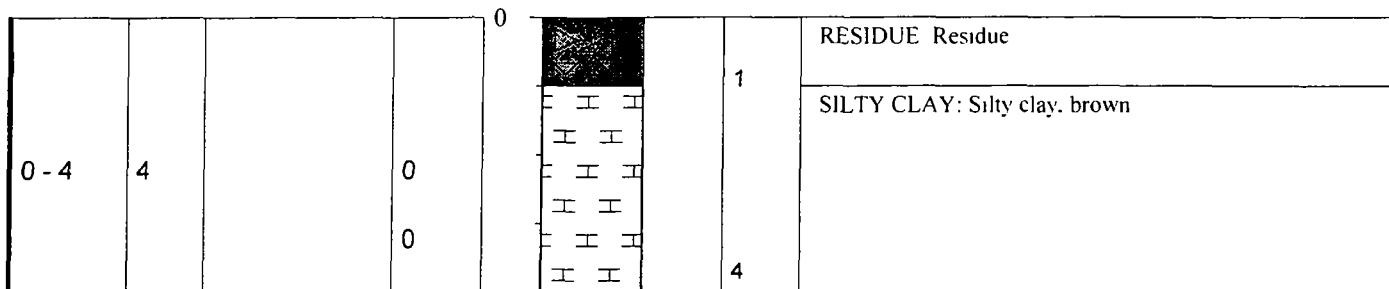
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/20/02

DRILLING CO: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP: --

SURVEY LOCATION: E695622.4 N909206.7

GROUND SURFACE ELEVATION: 633.27

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				



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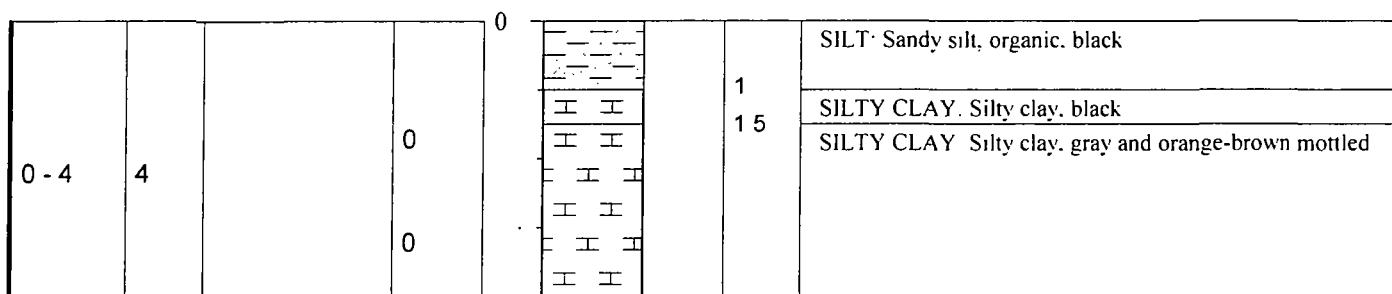
740 Waukegan Rd., Suite 401
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-10

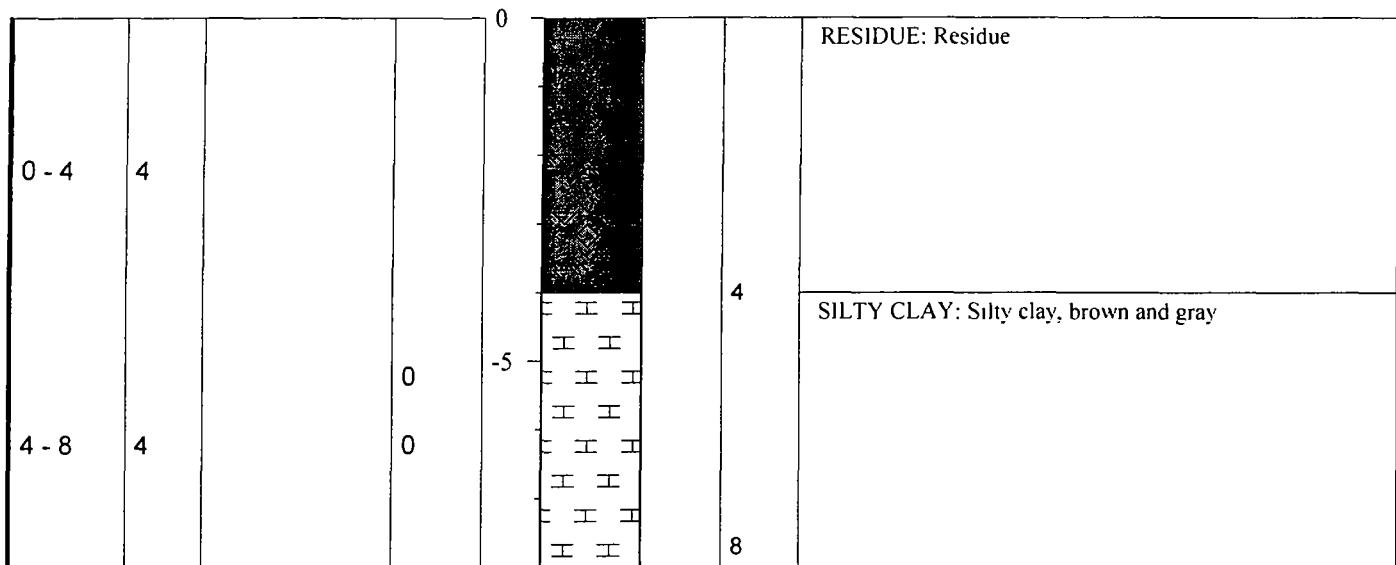
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO..	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS.	Macro-core Sampler					
DATES DRILLED:	7/18/02	HAMMER WT./DROP	--					
SURVEY LOCATION: E695262.4 N909126.7		GROUND SURFACE ELEVATION:--						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A3-11****TOTAL DEPTH: 8 feet**

PROJECT. SITE LOCATION: JOB NO.. LOGGED BY DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/20/02	DRILLING CO RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E695462.5 N909086.7		GROUND SURFACE ELEVATION: 632.82						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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Deerfield, Illinois 60015

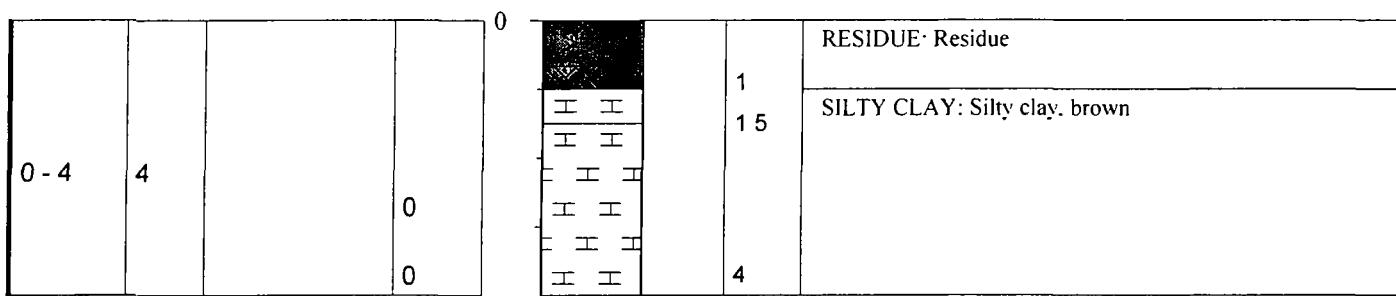
GEOLOGIC DRILL LOG**BOREHOLE NO.: A3-12****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY. **J. Fraser, C. Greco**
DATES DRILLED. **7/20/02**

DRILLING CO. **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING. **Geoprobe**
SAMPLING METHODS. **Macro-core Sampler**
HAMMER WT /DROP **--**

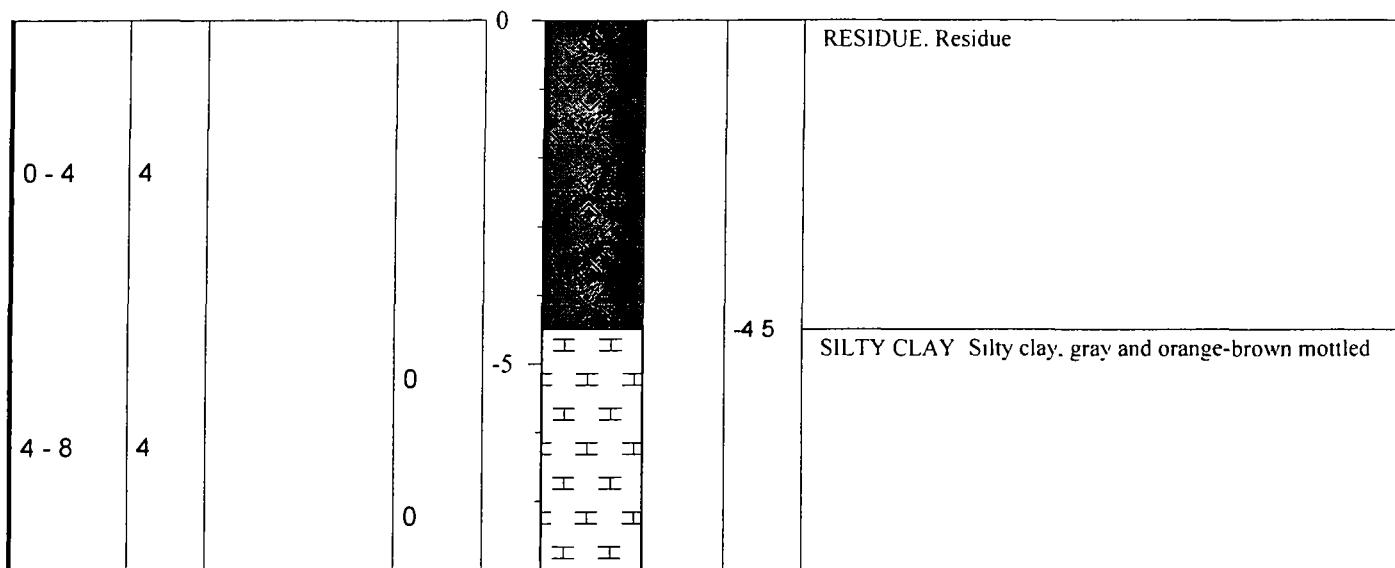
SURVEY LOCATION: **E695622.5 N909086.6**GROUND SURFACE ELEVATION: **634.61**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A3-13****TOTAL DEPTH: 8 feet**

PROJECT SITE LOCATION: JOB NO : LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO. RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION: E695502.4 N909006.7		GROUND SURFACE ELEVATION:--	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION

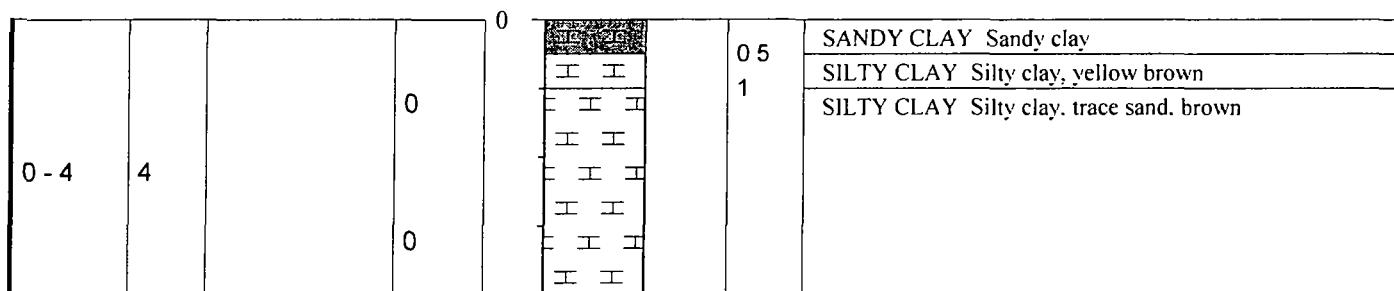


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GEOLOGIC DRILL LOGBOREHOLE NO.: **A3-14**TOTAL DEPTH: **4 feet**

PROJECT:	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler					
DATES DRILLED	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E 695222.5 N 908966.7		GROUND SURFACE ELEVATION: 624.18						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

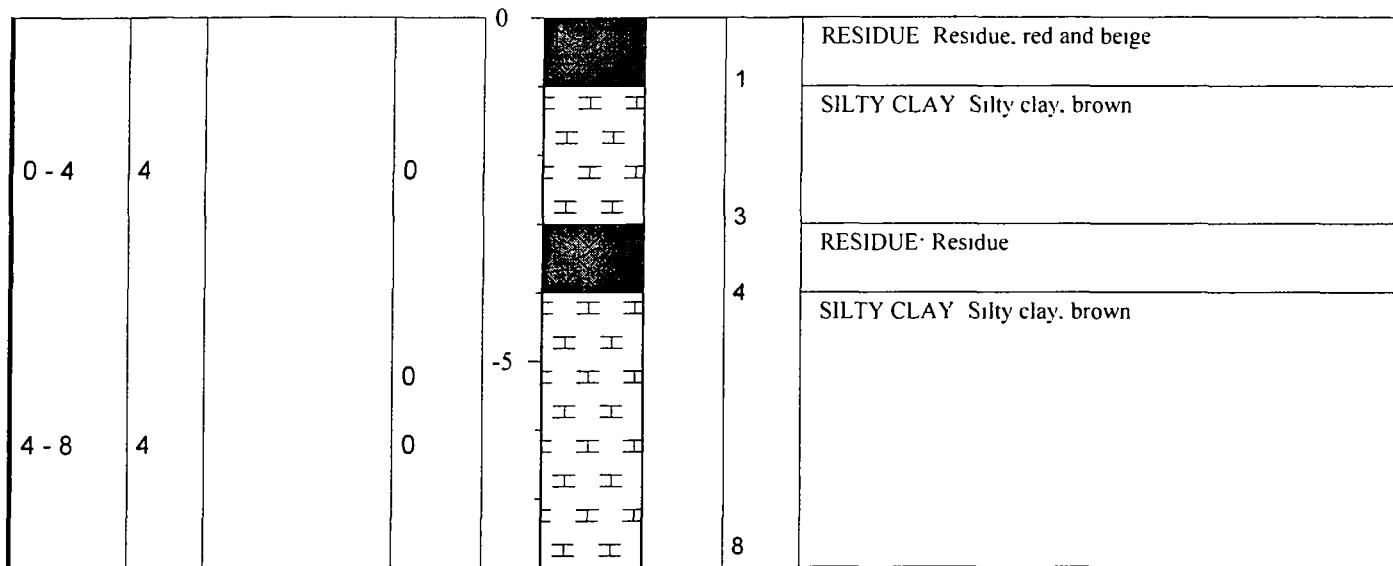
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-15

TOTAL DEPTH: 8 feet

PROJECT:	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO .	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS.	Macro-core Sampler					
DATES DRILLED	7/20/02	HAMMER WT./DROP	--					
SURVEY LOCATION: E695342.4 N908966.7		GROUND SURFACE ELEVATION: 624.58						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PIID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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740 Waukegan Rd., Suite 401
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-16

TOTAL DEPTH: 8 feet

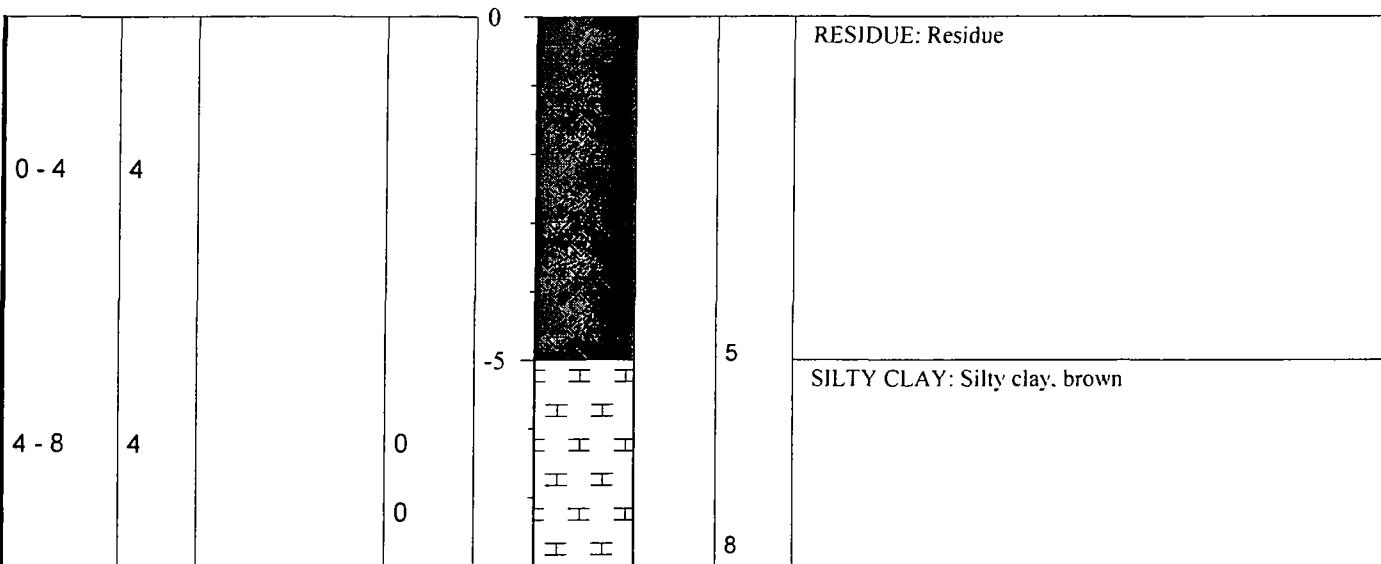
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/20/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP: --

SURVEY LOCATION: E695412.4 N908926.6

GROUND SURFACE ELEVATION: 631.42

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4			-5			0 - 5	RESIDUE: Residue
4 - 8	4		0	0			5 - 8	SILTY CLAY: Silty clay, brown

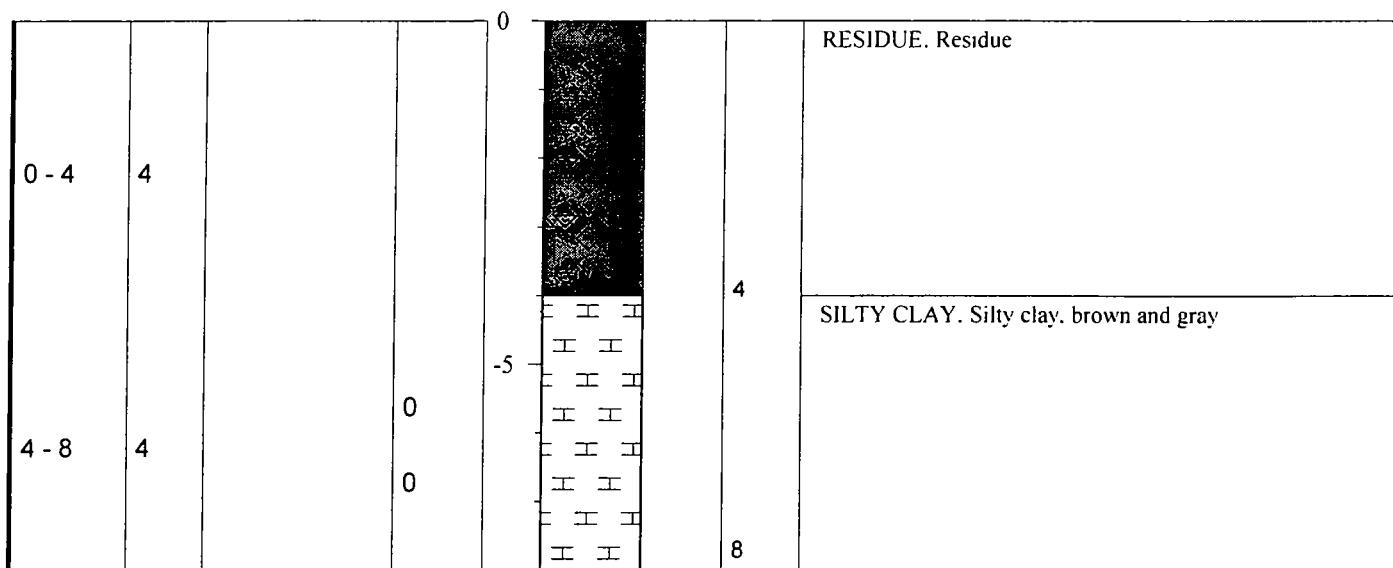


ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**

BOREHOLE NO.: A3-17

TOTAL DEPTH: 8 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/20/02	DRILLING CO. RIG TYPE METHOD OF DRILLING SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION:	E695633.4 N908926.7 GROUND SURFACE ELEVATION: 634.78		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION



ENVIRON

740 Waukegan Rd., Suite 401
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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-18

TOTAL DEPTH: 4 feet

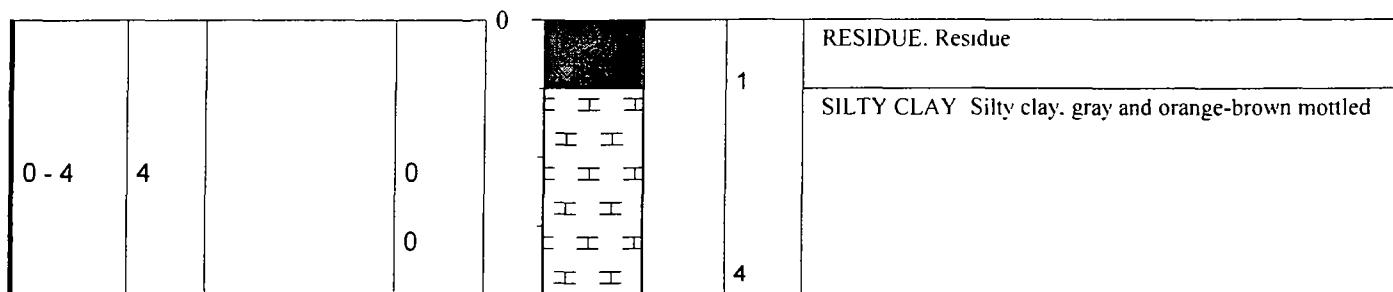
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO 2J-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/19/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E695342.4 N908846.7

GROUND SURFACE ELEVATION: 628.71

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0 0	0 0	H H H H H H H H H H H H H H H H		0 1 4	RESIDUE. Residue SILTY CLAY Silty clay, gray and orange-brown mottled



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-19

TOTAL DEPTH: 8 feet

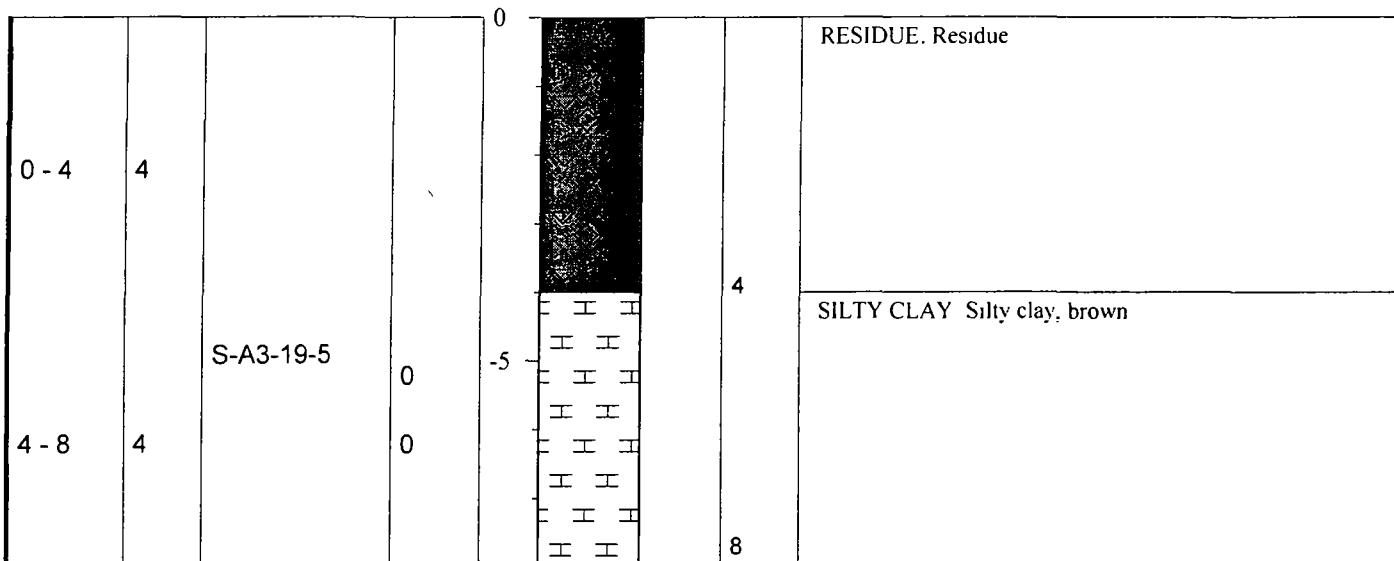
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/20/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP: --

SURVEY LOCATION: E695502.4 N908846.7

GROUND SURFACE ELEVATION: 634.3

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A3-19-5	0	0	-5	H H H H H H H H H H H H H H	0 - 4	RESIDUE. Residue
4 - 8	4		0				4 - 8	SILTY CLAY Silty clay, brown



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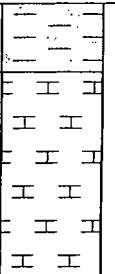
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-20

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION JOB NO : LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/19/02	DRILLING CO. RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION:	E695262.4 N908806.7 GROUND SURFACE ELEVATION: 625.92							
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4	S-A3-20-2	0	0		1	4	SANDY SILT. Gray sandy silt SILTY CLAY: Silty clay, gray and orange-brown mottled
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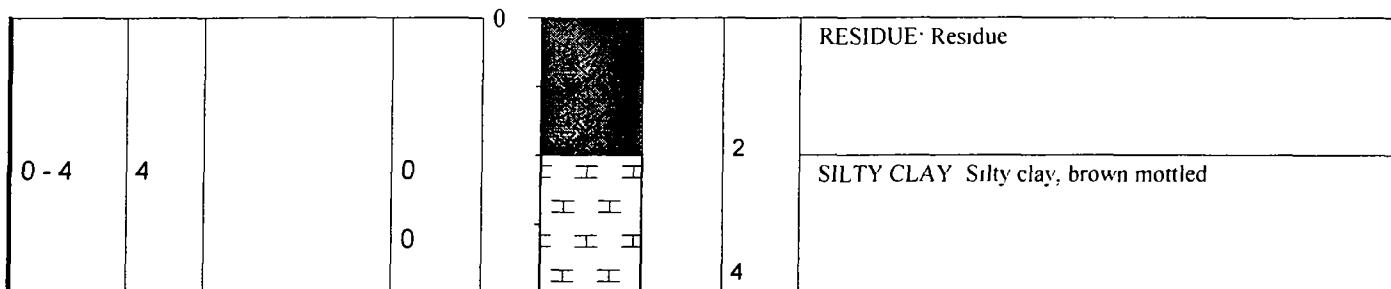
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A3-21****TOTAL DEPTH: 4 feet**

PROJECT. **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.. **21-7400E**
LOGGED BY. **J. Fraser, C. Greco**
DATES DRILLED: **7/18/02**

DRILLING CO. **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E695622.4 N908806.7**GROUND SURFACE ELEVATION: 634.46**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0 0	0	H H H H H H H H		2 4	RESIDUE Residue SILTY CLAY Silty clay, brown mottled



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-22

TOTAL DEPTH: 8 feet

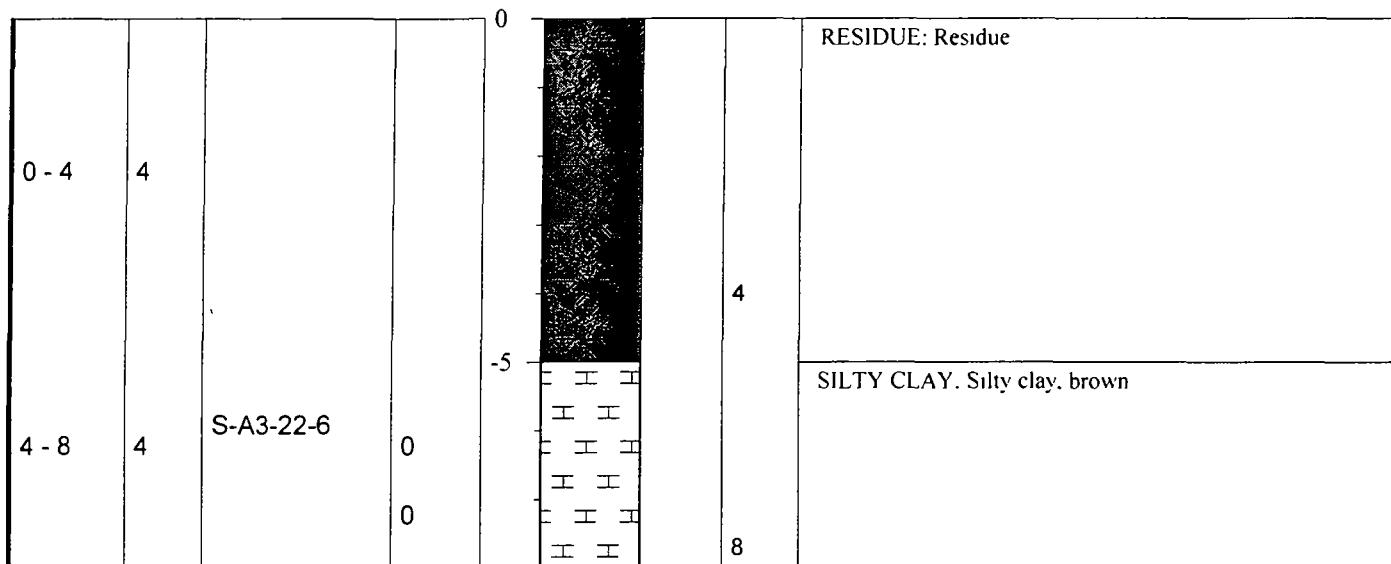
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED. 7/20/02

DRILLING CO : Philips
RIG TYPE Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS. Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695422.4 N908766.7

GROUND SURFACE ELEVATION: 633.49

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

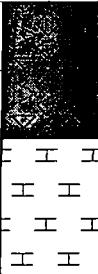
BOREHOLE NO.: A3-23

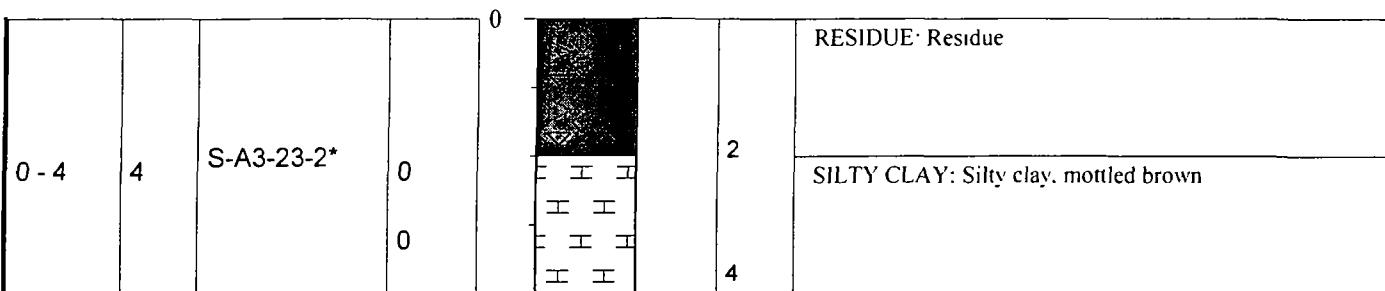
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO:	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED	7/19/02	HAMMER WT./DROP	--

SURVEY LOCATION: E695262.4 N908726.7

GROUND SURFACE ELEVATION: 624.58

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A3-23-2*	0 0	0 - 4			0 - 4	RESIDUE: Residue SILTY CLAY: Silty clay, mottled brown



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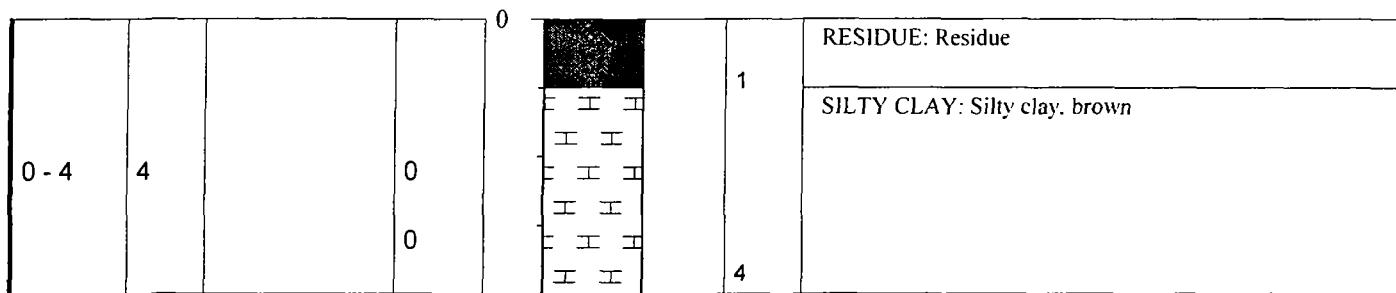
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-24

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION JOB NO LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/20/02	DRILLING CO. RIG TYPE. METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --	
SURVEY LOCATION: E695342.4 N908686.7		GROUND SURFACE ELEVATION: 624.79		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A3-25

TOTAL DEPTH: 4 feet

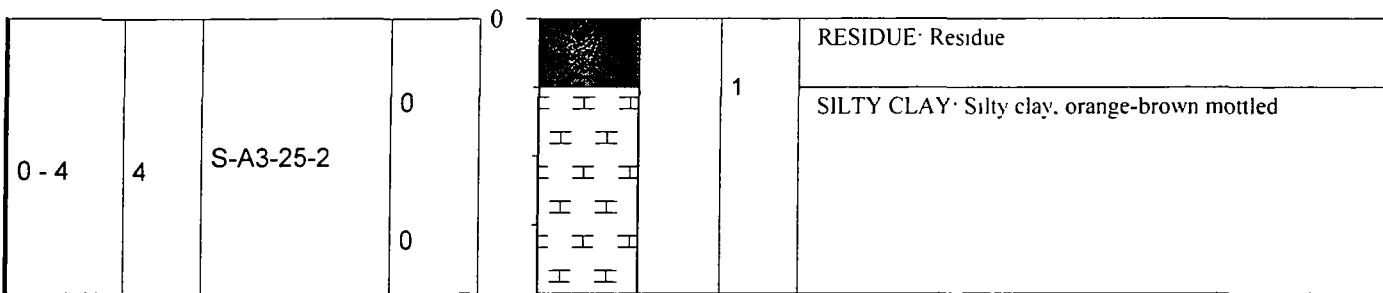
PROJECT. Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO : 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED 7/18/02

DRILLING CO. Philips
RIG TYPE. Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695502.4 N 908686.7

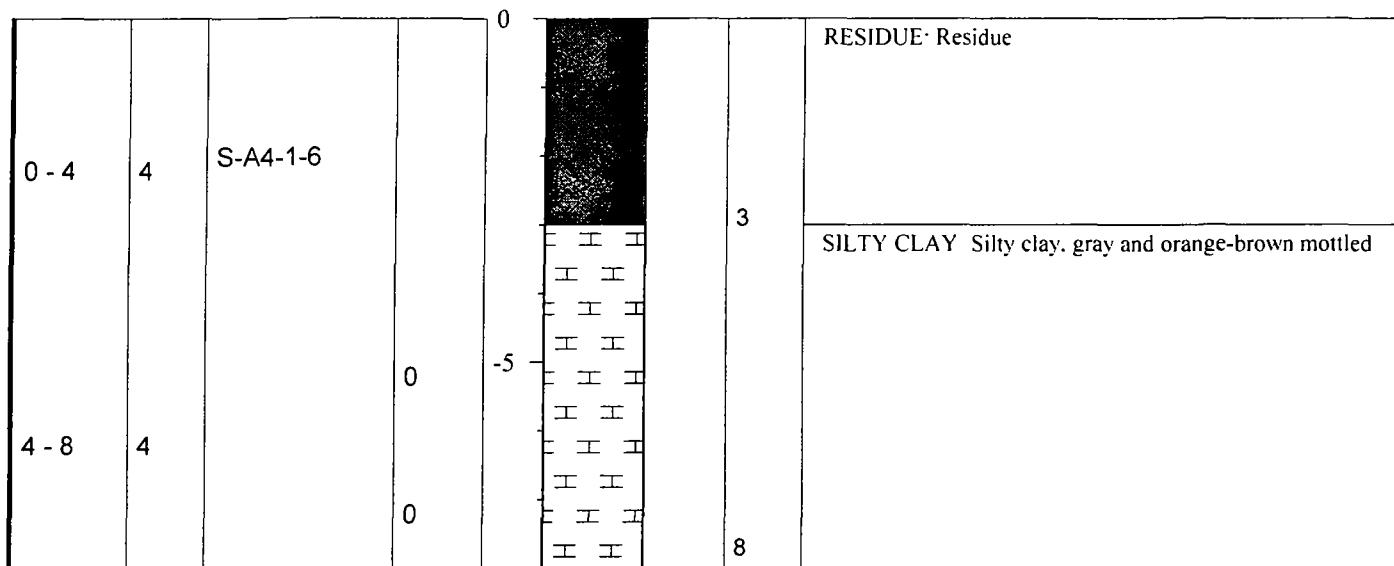
GROUND SURFACE ELEVATION: 631.79

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PbD (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A3-25-2	0	0				



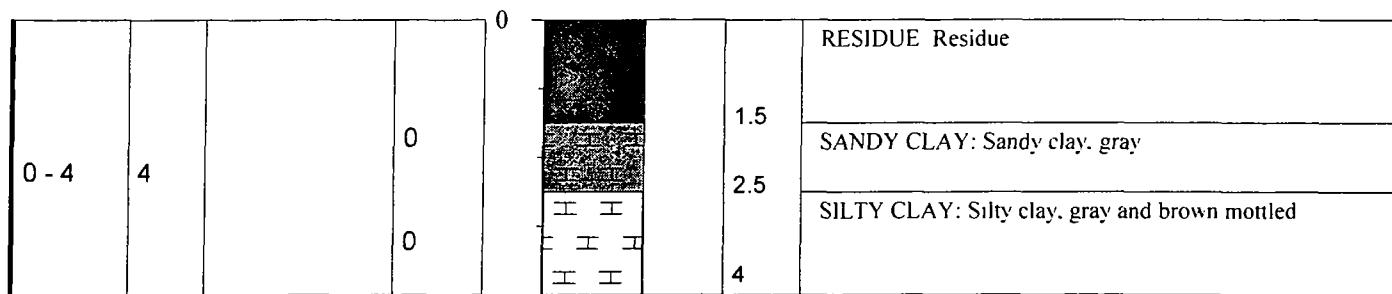
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-1****TOTAL DEPTH: 8 feet**

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/19/02	DRILLING CO. RIG TYPE METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --	
SURVEY LOCATION: E695417.9 N910212.5		GROUND SURFACE ELEVATION: 632.11		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-2****TOTAL DEPTH: 4 feet**

PROJECT: SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO. RIG TYPE METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E695078.4 N910189.6		GROUND SURFACE ELEVATION: 634.32						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-3

TOTAL DEPTH: 4 feet

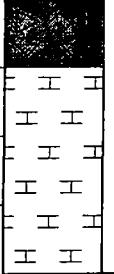
PROJECT: Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 7/19/02

DRILLING CO : Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695217.9 N910132.5

GROUND SURFACE ELEVATION: 633.5

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A4-3-2	0	0				

0		1	RESIDUE Residue					
0 - 4	4	S-A4-3-2	0				1	SILTY CLAY Silty clay, gray and orange-brown mottled

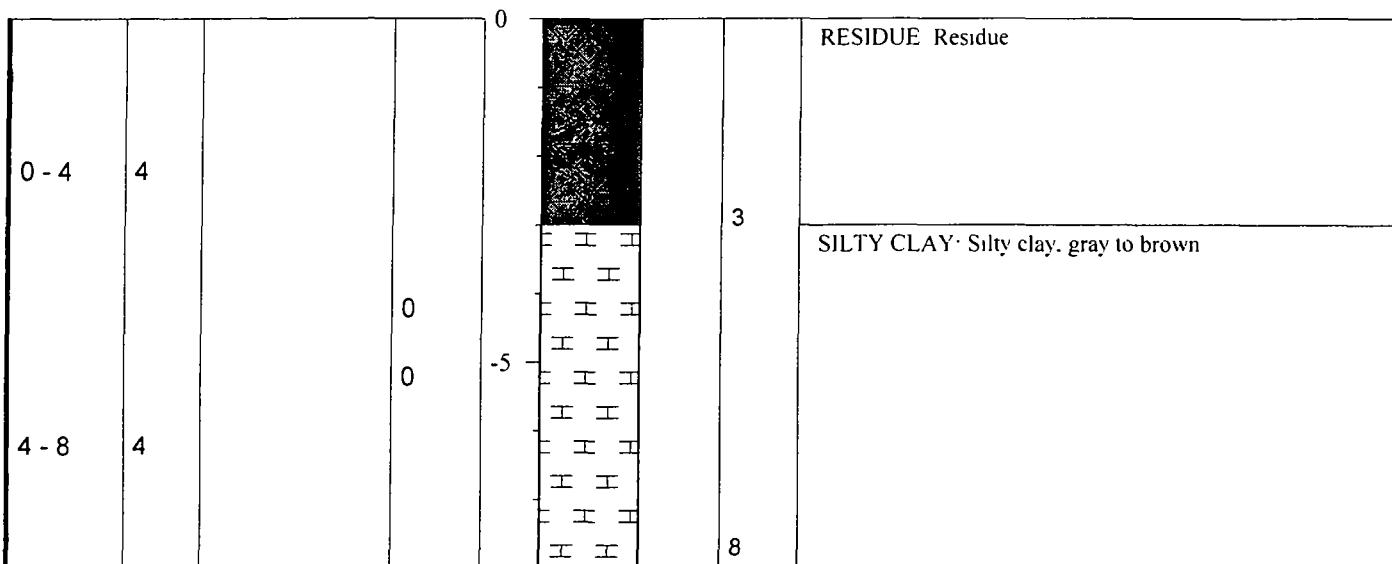
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **A4-4**TOTAL DEPTH: **8 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **7/20/02**

DRILLING CO.: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: **E695497.9 N910132.5**GROUND SURFACE ELEVATION: **631.7**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-5

TOTAL DEPTH: 4 feet

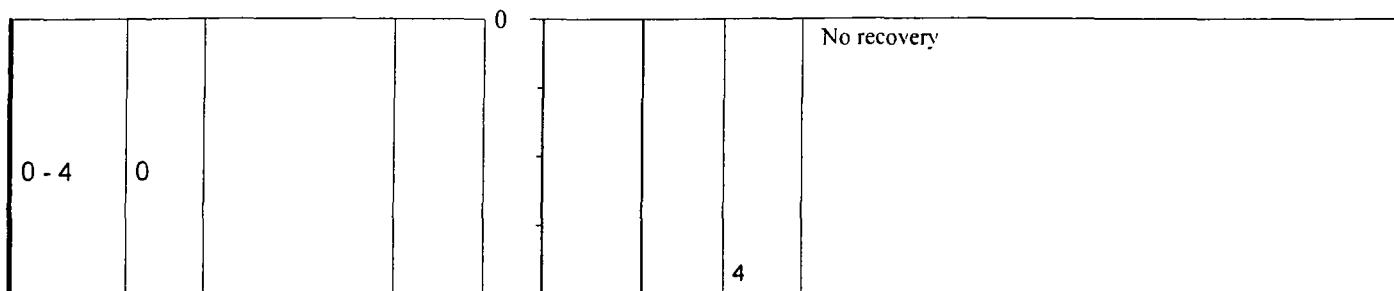
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 7/20/02

DRILLING CO Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E695577.9 N910132.5

GROUND SURFACE ELEVATION: 630.59

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	0			0			4	No recovery



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-6

TOTAL DEPTH: 4 feet

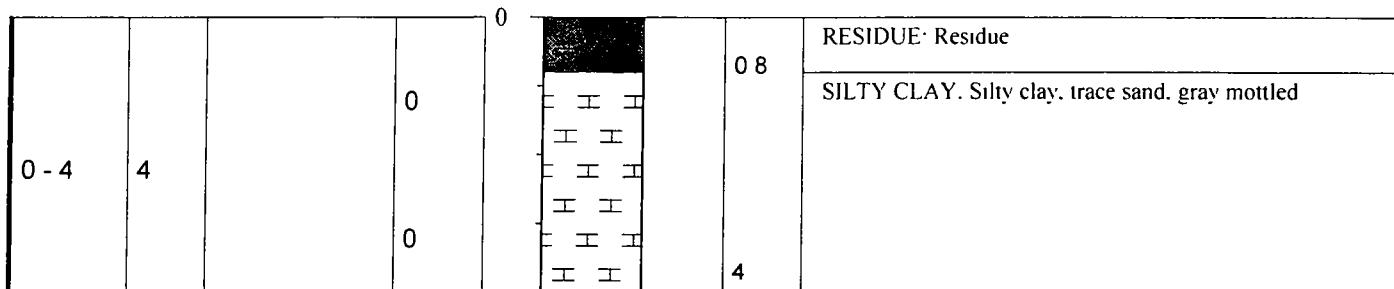
PROJECT. Eagle Zinc
SITE LOCATION. Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED. 7/18/02

DRILLING CO. Philips
RIG TYPE. Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS. Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695097.9 N910092.5

GROUND SURFACE ELEVATION: 634.02

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0	H H H H H H H H H H H H H H H H		0 - 0.8	RESIDUE. Residue SILTY CLAY. Silty clay, trace sand, gray mottled



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**

BOREHOLE NO.: A4-7

TOTAL DEPTH: 4 feet

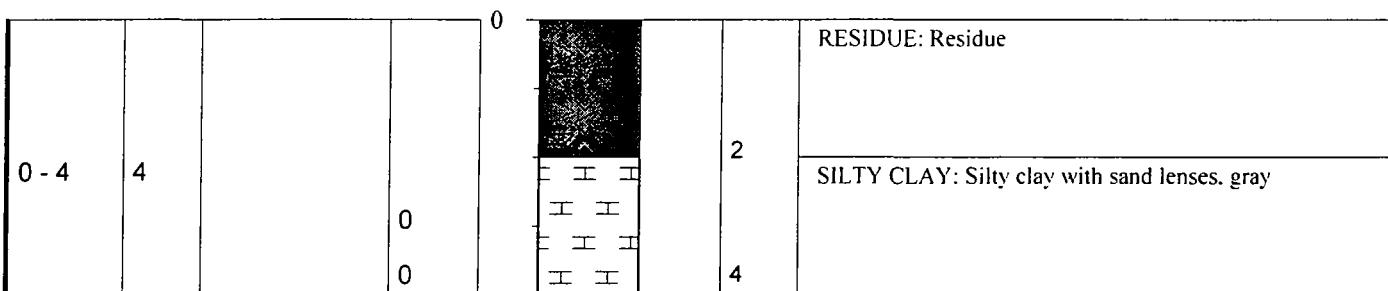
PROJECT Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.. 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED 7/20/02

DRILLING CO.. Philips
RIG TYPE Direct Push
METHOD OF DRILLING. Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E695497.9 N910052.5

GROUND SURFACE ELEVATION: 631.48

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0 0	0	H H H H H H H H H H H H H H		0 2 4	RESIDUE: Residue SILTY CLAY: Silty clay with sand lenses. gray



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-8

TOTAL DEPTH: 8 feet

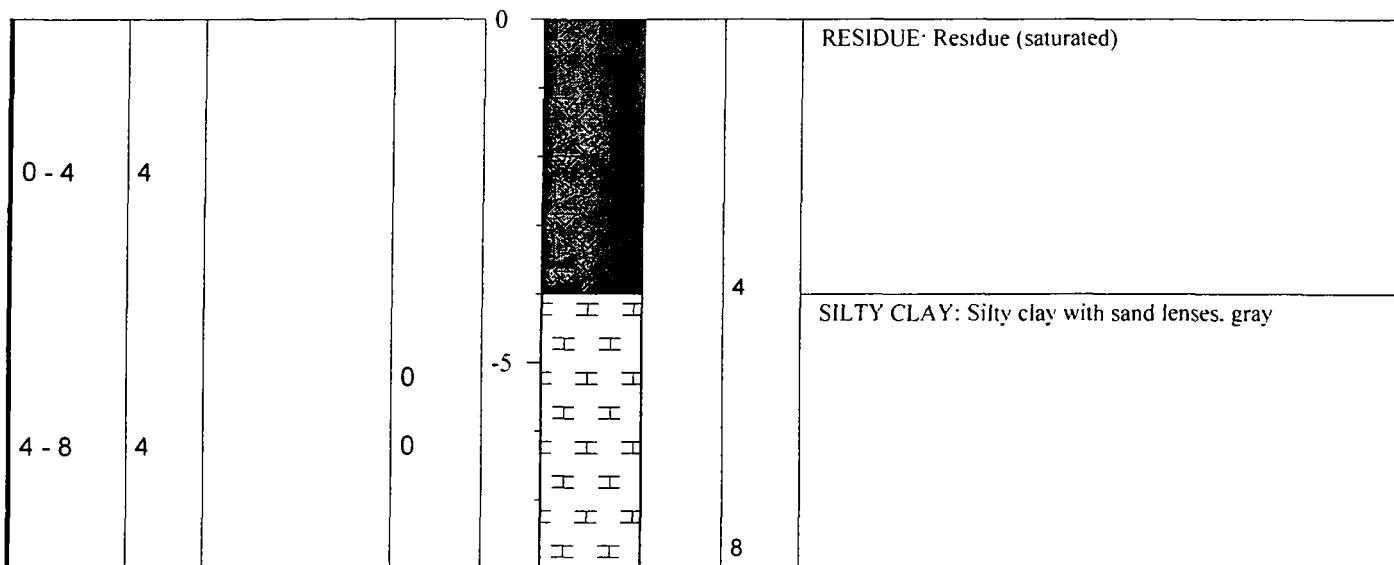
PROJECT **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY. **J. Fraser, C. Greco**
DATES DRILLED. **7/20/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E695577.9 N910052.5

GROUND SURFACE ELEVATION: 632.33

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4			0				
4 - 8	4			0				



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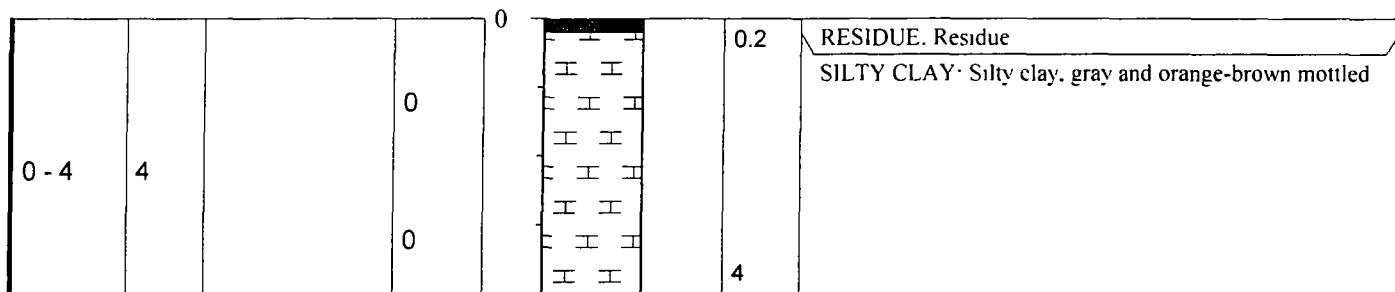
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-9

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED	7/18/02	HAMMER WT./DROP	--
SURVEY LOCATION: E695057.9 N910012.5		GROUND SURFACE ELEVATION: 634.33	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	SOIL DESCRIPTION
PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS
LAYER DEPTH (ft)			



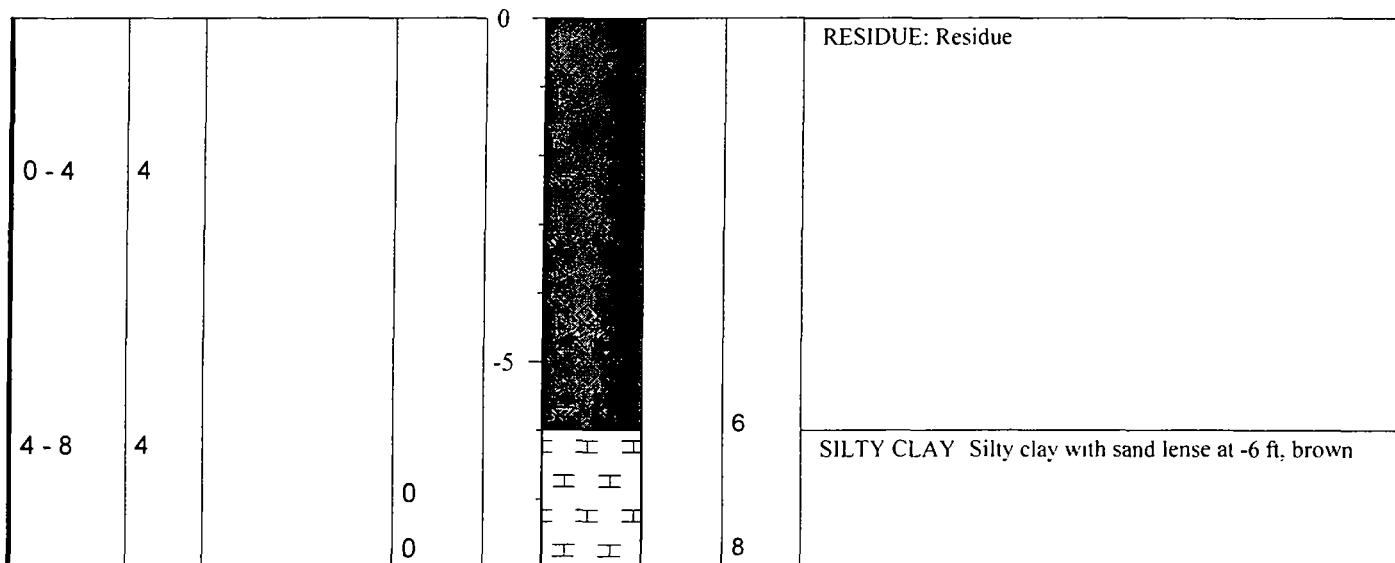
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-10****TOTAL DEPTH: 8 feet**

PROJECT **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO : **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **7/20/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E695657.9 N910012.5**GROUND SURFACE ELEVATION: 631.27**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4			0			0 - 4	RESIDUE: Residue
4 - 8	4		0	0		H H H H H H H H	6 - 8	SILTY CLAY Silty clay with sand lense at -6 ft, brown



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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-11

TOTAL DEPTH: 4 feet

PROJECT:	Eagle Zinc	DRILLING CO.:	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE:	Direct Push					
JOB NO.:	2J-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED:	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E695057.9 N99892.5		GROUND SURFACE ELEVATION: 633.17						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0			4	SILTY CLAY Silty clay, some sand. gray and brown mottled
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

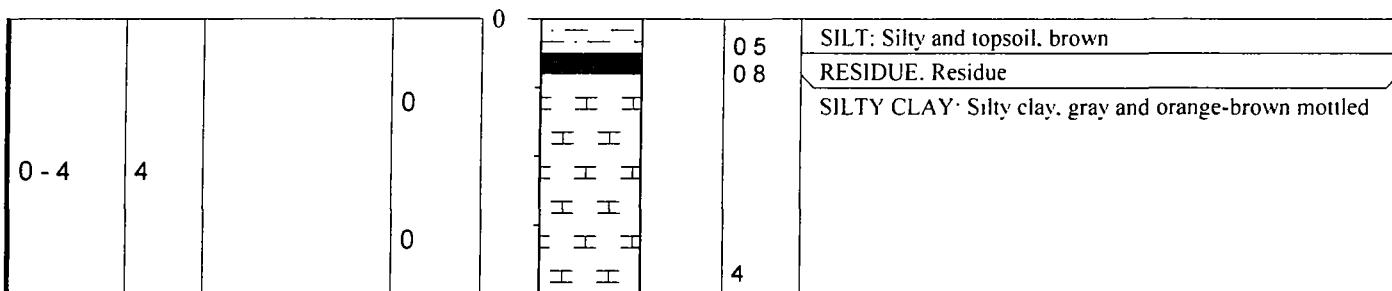
BOREHOLE NO.: A4-12

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO..	Philips
SITE LOCATION.	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler
DATES DRILLED:	7/19/02	HAMMER WT /DROP	--

SURVEY LOCATION: E695217.9 N909892.5

GROUND SURFACE ELEVATION:631.58



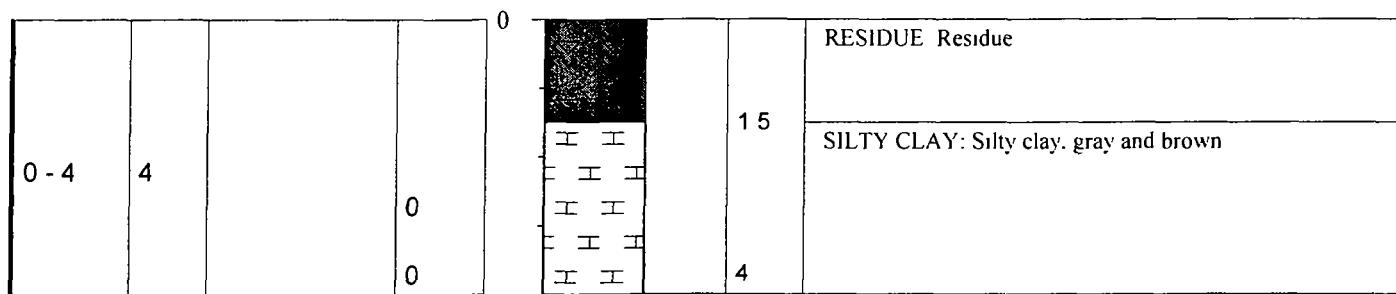
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-13****TOTAL DEPTH: 4 feet**

PROJECT. **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.. **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED **7/20/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E695577.9 N909812.5**GROUND SURFACE ELEVATION: 629.81**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-14****TOTAL DEPTH: 4 feet**

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED:	7/19/02	HAMMER WT./DROP	--

SURVEY LOCATION: E695257.9 N909772.5

GROUND SURFACE ELEVATION: 630.89

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0			0 7	RESIDUE: Residue SILTY CLAY Silty clay, gray and orange-brown mottled

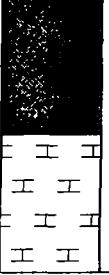
0 - 4	4		0	0			0 7	RESIDUE: Residue SILTY CLAY Silty clay, gray and orange-brown mottled
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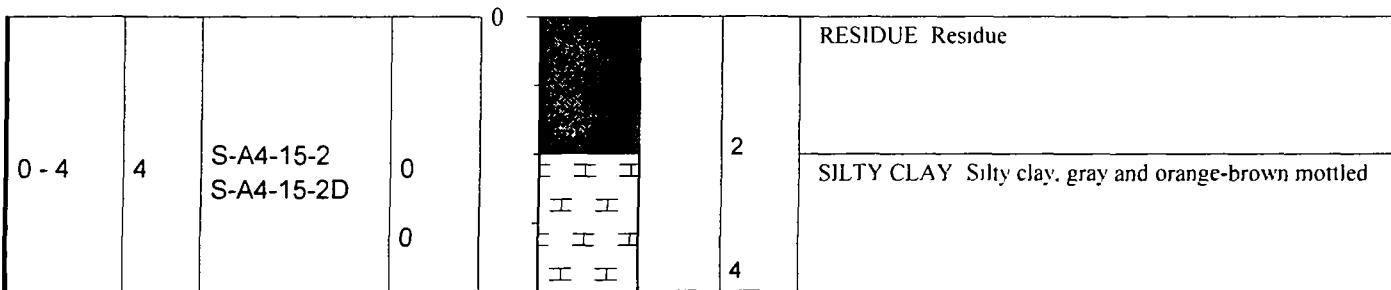
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-15****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED **7/18/02**

DRILLING CO: **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E695337.9 N99732.5**GROUND SURFACE ELEVATION:** 629.08

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A4-15-2 S-A4-15-2D	0 0	0			0 2 4	RESIDUE Residue SILTY CLAY Silty clay, gray and orange-brown mottled



ENVIRON

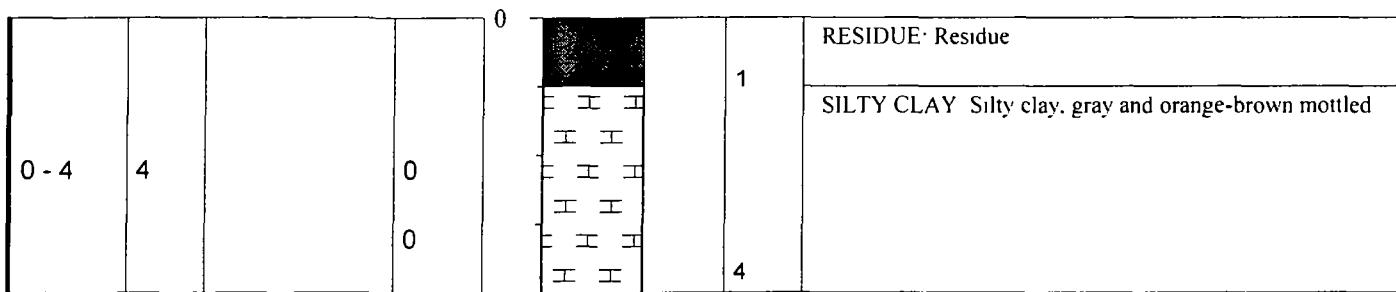
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-16

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/18/02	DRILLING CO RIG TYPE METHOD OF DRILLING SAMPLING METHODS HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION	E695497.9 N909732.5 GROUND SURFACE ELEVATION: 629.75		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION



ENVIRON

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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-17

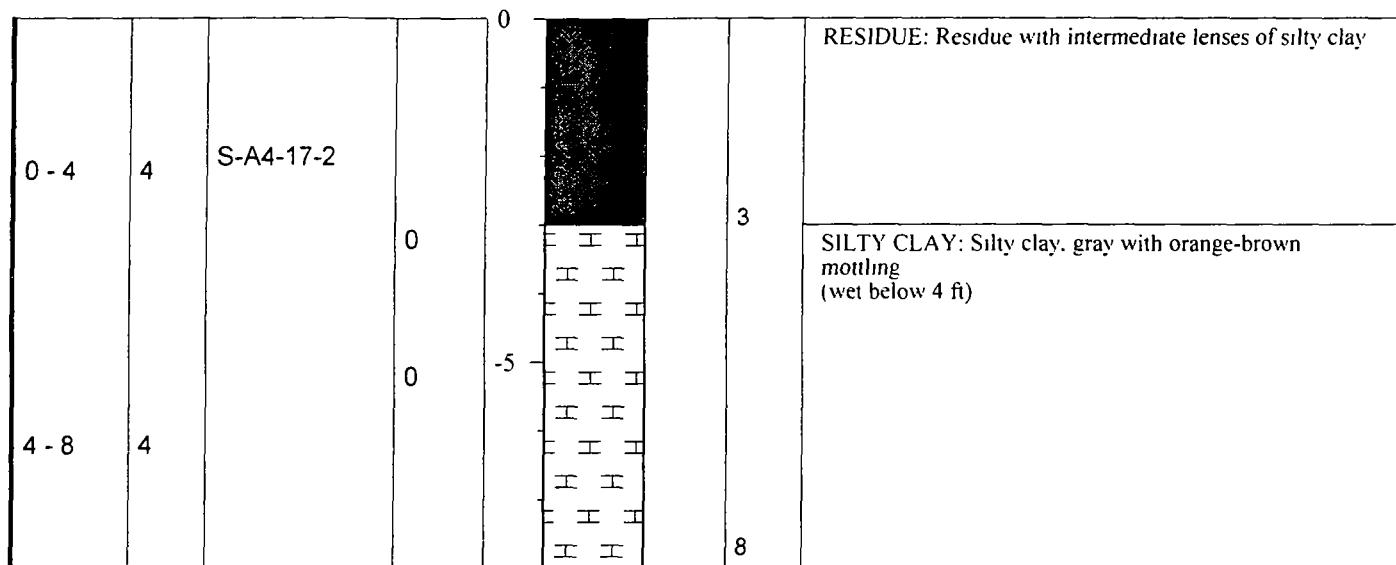
TOTAL DEPTH: 8 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	7/18/02	HAMMER WT./DROP	--

SURVEY LOCATION: E695297.9 N909652.5

GROUND SURFACE ELEVATION: 628.12

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



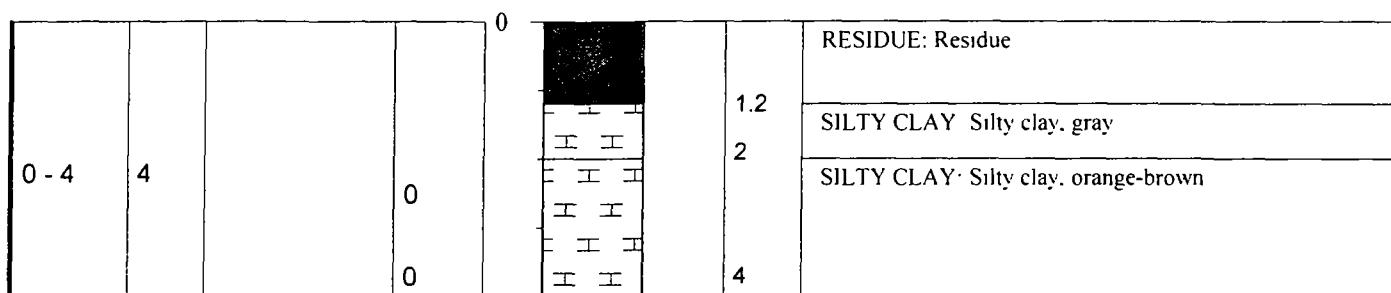
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-18****TOTAL DEPTH: 4 feet**

PROJECT	Eagle Zinc	DRILLING CO..	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY.	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	7/19/02	HAMMER WT /DROP	--

SURVEY LOCATION: E695222.4 N909612.5

GROUND SURFACE ELEVATION: 628.62

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0				



ENVIRON

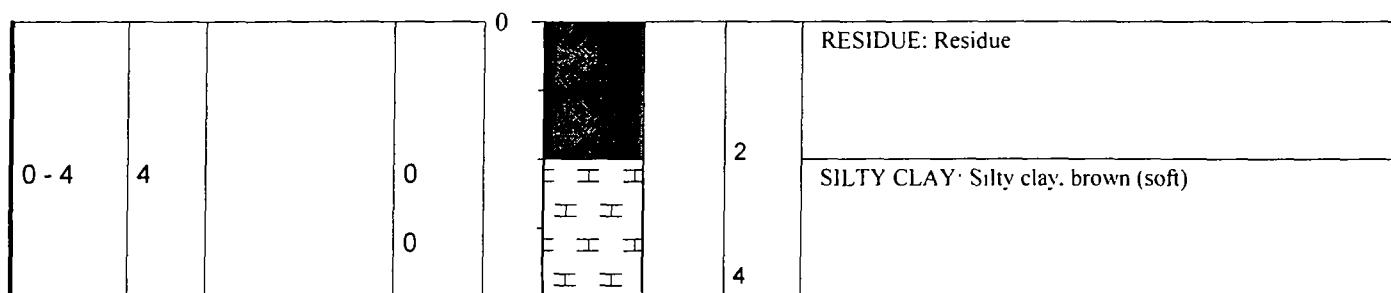
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-19

TOTAL DEPTH: 4 feet

PROJECT.	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE.	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING.	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS.	Macro-core Sampler					
DATES DRILLED:	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E695497.9 N909572.5		GROUND SURFACE ELEVATION: 626.81						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

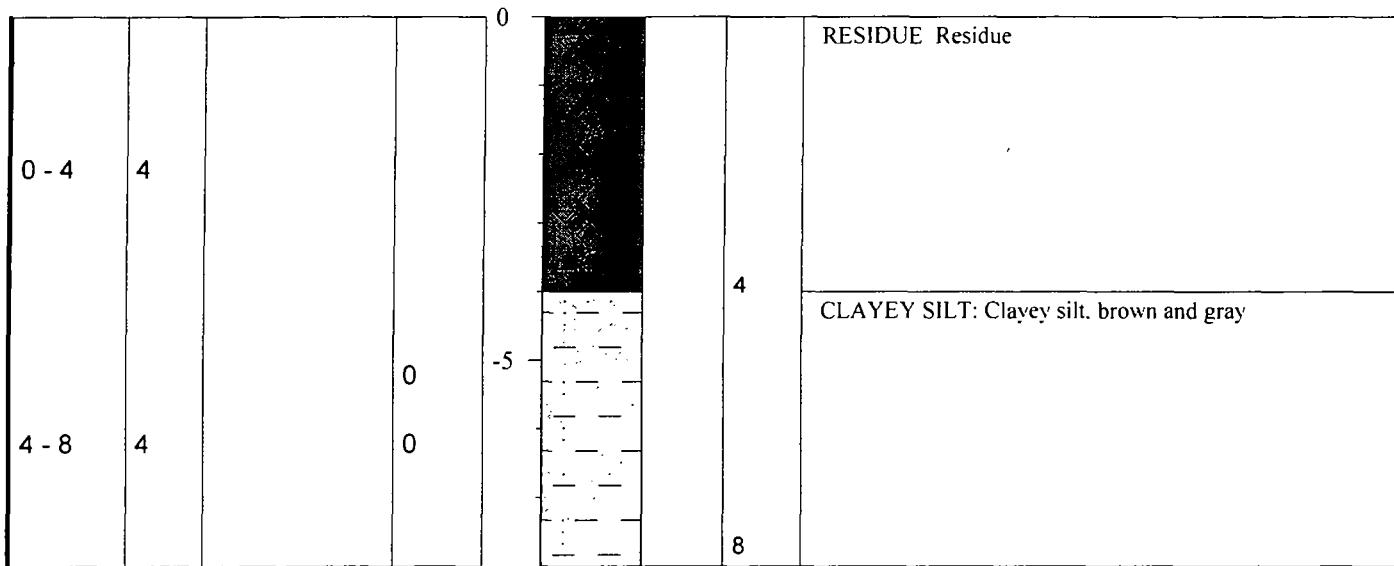
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-20

TOTAL DEPTH: 8 feet

PROJECT	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	7/20/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E695617.9 N909572.5		GROUND SURFACE ELEVATION: 629.43						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



ENVIRON

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GEOLOGIC DRILL LOG

BOREHOLE NO.: A4-21

TOTAL DEPTH: 4 feet

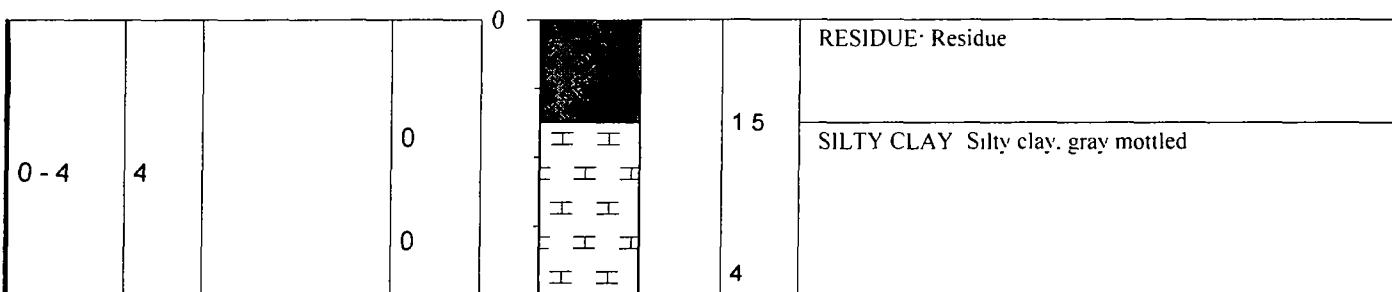
PROJECT. Eagle Zinc
SITE LOCATION. Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 7/19/02

DRILLING CO Philips
RIG TYPE. Direct Push
METHOD OF DRILLING. Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E695257.9 N909492.5

GROUND SURFACE ELEVATION: 629.43

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4		0	0	H H H H H H H H		1 5	RESIDUE: Residue SILTY CLAY Silty clay, gray mottled



ENVIRON740 Waukegan Rd.. Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-22****TOTAL DEPTH: 4 feet**

PROJECT **Eagle Zinc**
SITE LOCATION. **Hillsboro, IL**
JOB NO **21-7400E**
LOGGED BY. **J. Fraser, C. Greco**
DATES DRILLED. **7/19/02**

DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: **E695377.9 N909412.5**GROUND SURFACE ELEVATION: **624.11**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0 - 4	4	S-A4-22-2	0	0	H H H H H H H H H H H H H H H H			SILTY CLAY: Silty clay, gray, brown and orange mottled

0 - 4	4	S-A4-22-2	0	0	H H H H H H H H H H H H H H H H			SILTY CLAY: Silty clay, gray, brown and orange mottled
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ENVIRON

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Deerfield, Illinois 60015

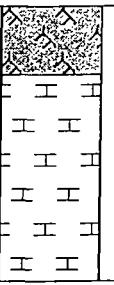
GEOLOGIC DRILL LOG**BOREHOLE NO.: A4-23****TOTAL DEPTH: 4 feet**

PROJECT: SITE LOCATION: JOB NO LOGGED BY: DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 7/20/02	DRILLING CO: RIG TYPE: METHOD OF DRILLING SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E695577.9 N909412.5		GROUND SURFACE ELEVATION: 630.1						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0	0		1	RESIDUE: Residue
					H H H H		2	SILTY CLAY Silty clay, trace residue
					H H H H		4	SILTY CLAY: Silty clay, brown

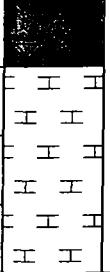
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **A4-24**TOTAL DEPTH: **4 feet**

PROJECT	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	7/18/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E695297.9 N909372.5		GROUND SURFACE ELEVATION: 623.33						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0			1	TOPSOIL: Clayey topsoil, trace residue SILTY CLAY Silty clay, gray
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ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: A4-25****TOTAL DEPTH: 4 feet**

PROJECT	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED:	7/20/02	HAMMER WT /DROP	--					
SURVEY LOCATION:	E695326 N910016.5	GROUND SURFACE ELEVATION:	--					
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0 - 4	4		0	0	0		1	RESIDUE: Residue
							4	SILTY CLAY. Silty clay, brown and gray

ENVIRON

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-1

TOTAL DEPTH: 4 feet

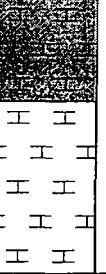
PROJECT Eagle Zinc
SITE LOCATION Hillsboro, IL
JOB NO. 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 07/17/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 694964.3 N 910292.5

GROUND SURFACE ELEVATION: 633.52'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			1.5	SANDY CLAY Sandy clay, light brown, stiff, dry SILTY CLAY Silty clay, orange-brown mottling, stiff, moist

0-4	4.0		0	0			1.5	SANDY CLAY Sandy clay, light brown, stiff, dry SILTY CLAY Silty clay, orange-brown mottling, stiff, moist
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-2

TOTAL DEPTH: 4 feet

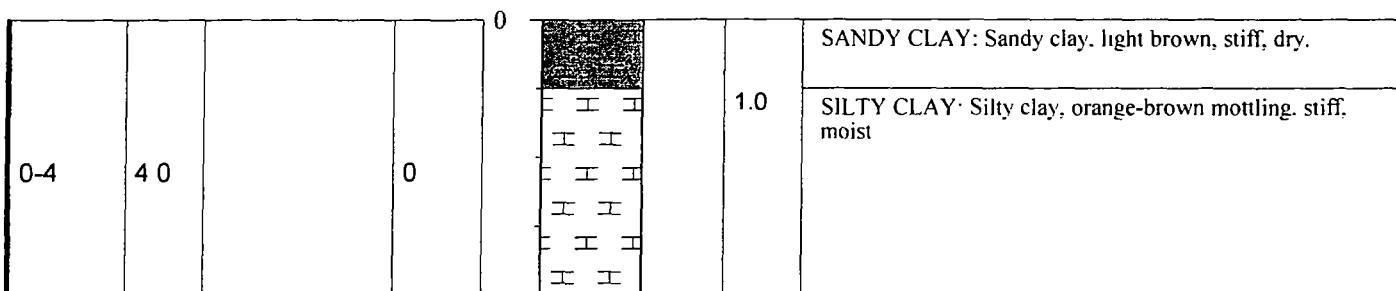
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED: 07/17/02

DRILLING CO.. Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

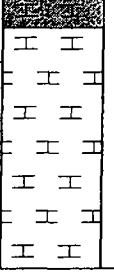
SURVEY LOCATION: E 695177.3 N 909772.5

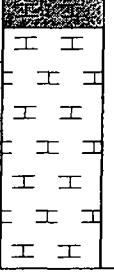
GROUND SURFACE ELEVATION: 631.4'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H		1.0	SANDY CLAY: Sandy clay, light brown, stiff, dry. SILTY CLAY: Silty clay, orange-brown mottling, stiff, moist



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **WA-3**TOTAL DEPTH: **4 feet**PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED **07/17/02**DRILLING CO : **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**SURVEY LOCATION: **E 694924.3 N 909639.5**GROUND SURFACE ELEVATION: **632.7'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			0.5	SANDY CLAY: Sandy clay, brown, stiff, dry. SILTY CLAY. Silty clay, brown, moist.

0-4	4.0		0	0			0.5	SANDY CLAY: Sandy clay, brown, stiff, dry. SILTY CLAY. Silty clay, brown, moist.
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-4

TOTAL DEPTH: 4 feet

PROJECT: **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/17/02**

DRILLING CO: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: E 694884.3 N 909532.5

GROUND SURFACE ELEVATION: 630.71'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H		0.5	SANDY CLAY Sandy clay. light brown, stiff, dry SILTY CLAY Silty clay. brown mottling, stiff, moist

0-4	4.0		0	0	H H H H H H H H H H H H H H		0.5	SANDY CLAY Sandy clay. light brown, stiff, dry SILTY CLAY Silty clay. brown mottling, stiff, moist
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-5

TOTAL DEPTH: 4 feet

PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/17/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP: --

SURVEY LOCATION: E 695194.5 N909332.2

GROUND SURFACE ELEVATION: 622.51'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H		0.5	SANDY CLAY: Sandy clay, brown, stiff, dry SILTY CLAY: Silty clay, grey, orange-brown mottling, stiff, moist.

0-4	4.0		0	0	H H H H H H H H H H H H H H H H		0.5	SANDY CLAY: Sandy clay, brown, stiff, dry SILTY CLAY: Silty clay, grey, orange-brown mottling, stiff, moist.
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ENVIRON

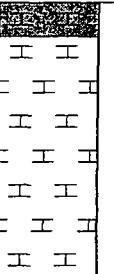
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-6

TOTAL DEPTH: 4 feet

PROJECT SITE LOCATION: JOB NO.. LOGGED BY: DATES DRILLED:	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/17/02	DRILLING CO. RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E695084.3 N 909212.5		GROUND SURFACE ELEVATION: 621.99'						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0-4	40		0	0			0.5	SANDY CLAY: Sandy clay, brown, stiff, dry. SILTY CLAY: Silty clay, grey, orange-brown mottling, stiff, moist.
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-7

TOTAL DEPTH: 4 feet

PROJECT:	Eagle Zinc	DRILLING CO.:	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY.	J. Fraser, C. Greco	SAMPLING METHODS.	Macro-core Sampler
DATES DRILLED:	07/17/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 694960.7 N 909175.8

GROUND SURFACE ELEVATION: 625.44'

SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
SSS INTERVAL (ft)	SSS RECOVERY (ft)					

			0			
0-4	4.0		0		0.5	SANDY CLAY Sandy clay, dark brown, some organics, stiff. SILTY CLAY Silty clay, brown mottling, stiff, moist

ENVIRON

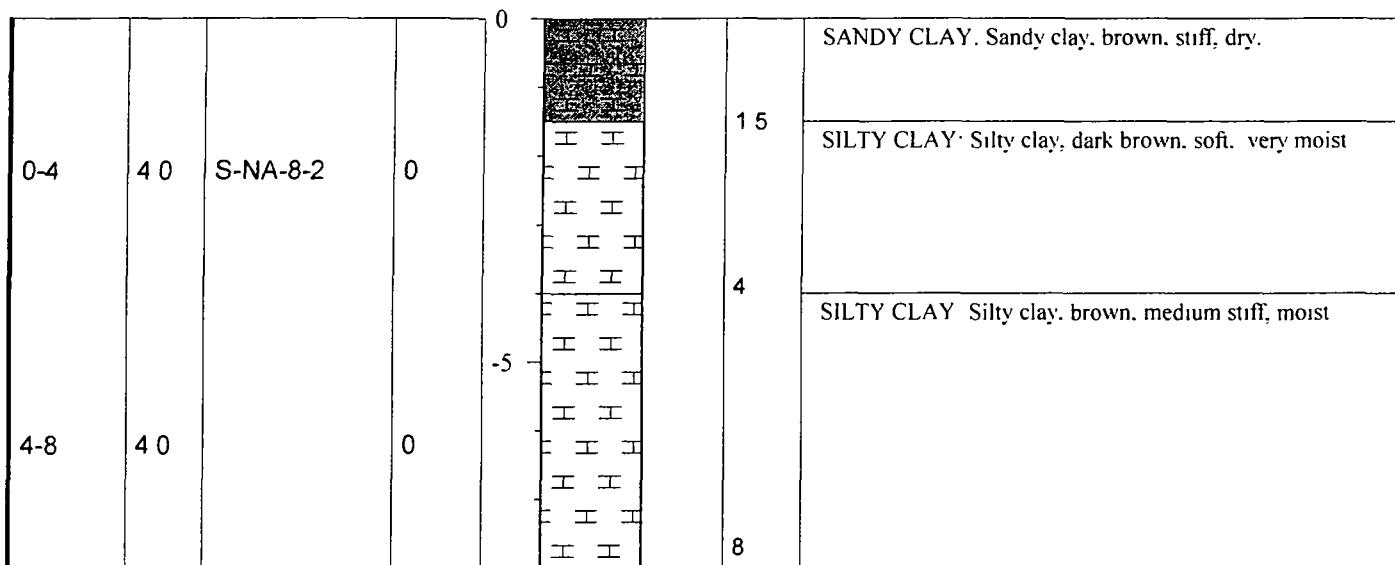
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: WA-8

TOTAL DEPTH: 8 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY. DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/17/02	DRILLING CO. RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION: E695084.9 N 908998		GROUND SURFACE ELEVATION: 619.4'	
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION



ENVIRON

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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

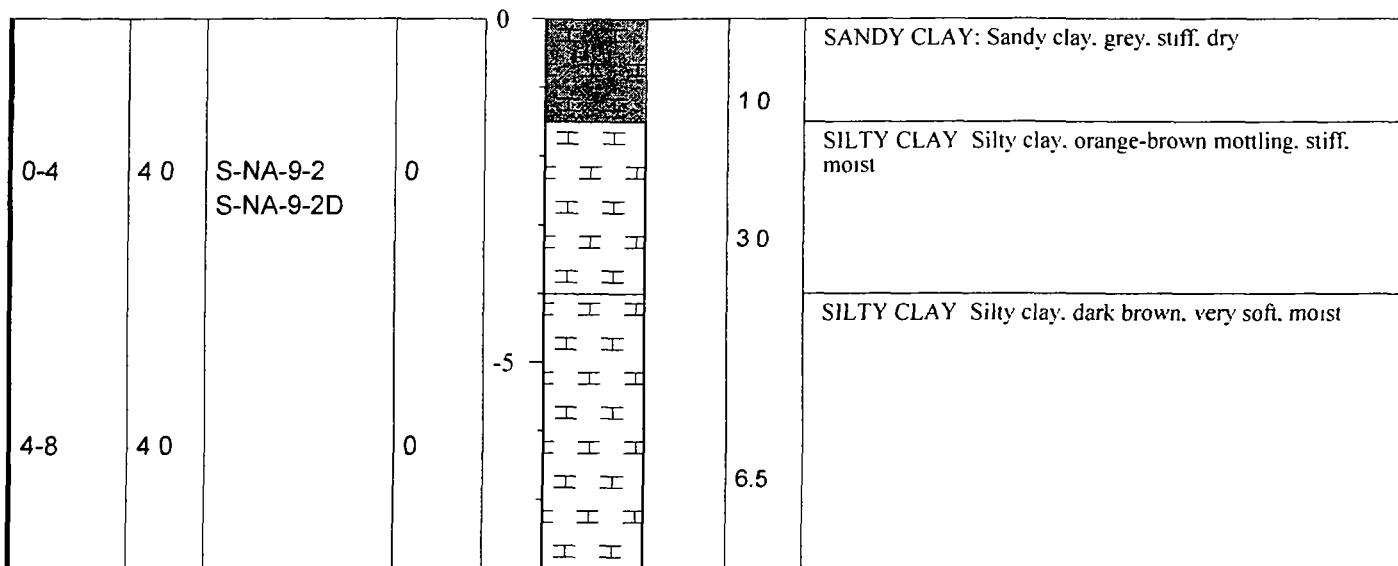
BOREHOLE NO.: WA-9

TOTAL DEPTH: 11 feet

PROJECT:	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION.	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED:	07/17/02	HAMMER WT./DROP	--

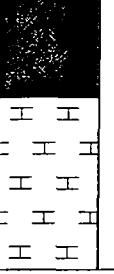
SURVEY LOCATION: E695084.2 N 908578.5

GROUND SURFACE ELEVATION: 612.15



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **WA-10**TOTAL DEPTH: **4 feet**

PROJECT.	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION:	Hillsboro, IL	RIG TYPE:	Direct Push					
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe					
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	07/17/02	HAMMER WT./DROP	--					
SURVEY LOCATION:	E 695084.3 N 908372.5	GROUND SURFACE ELEVATION:	618.73'					
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0-4	4.0		0	0			1.5	RESIDUE: Residue SILTY CLAY Silty clay, brown mottling, stiff, moist
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ENVIRON

740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: NA-1

TOTAL DEPTH: 4 feet

PROJECT.	Eagle Zinc	DRILLING CO	Philips					
SITE LOCATION	Hillsboro, IL	RIG TYPE:	Direct Push					
JOB NO	21-7400E	METHOD OF DRILLING	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler					
DATES DRILLED	07/17/02	HAMMER WT /DROP	--					
SURVEY LOCATION: E 695523.9, N910796.5		GROUND SURFACE ELEVATION: 627.56'						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0								
0-4	4 0		0				1 0	SANDY CLAY: Sandy clay, grey, dry, very stiff

ENVIRON

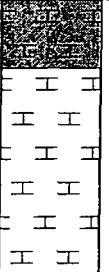
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: NA-2

TOTAL DEPTH: 4 feet

PROJECT.	Eagle Zinc	DRILLING CO.	Philips					
SITE LOCATION:	Hillsboro, IL	RIG TYPE	Direct Push					
JOB NO.:	21-7400E	METHOD OF DRILLING:	Geoprobe					
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS:	Macro-core Sampler					
DATES DRILLED:	07/17/02	HAMMER WT./DROP	--					
SURVEY LOCATION:	E 694958 N 910696.2	GROUND SURFACE ELEVATION:	632.01'					
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

0-4	4.0		0	0			1.0	SANDY CLAY Sandy clay, brown, some organics, stiff, dry.
							4.0	SILTY CLAY Silty clay, stiff, slightly moist

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GEOLOGIC DRILL LOG

BOREHOLE NO.: NA-3

TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING:	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	07/17/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 695208 N 910496.2

GROUND SURFACE ELEVATION: 631.15'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			1.5	SANDY CLAY: Sandy clay, brown, some organics, stiff, dry.

0-4	4.0		0	0			1.5	SANDY CLAY: Sandy clay, brown, some organics, stiff, dry.
							4.0	SILTY CLAY: Silty clay, brown, stiff, slightly moist

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GEOLOGIC DRILL LOG

BOREHOLE NO.: NA-4

TOTAL DEPTH: 4 feet

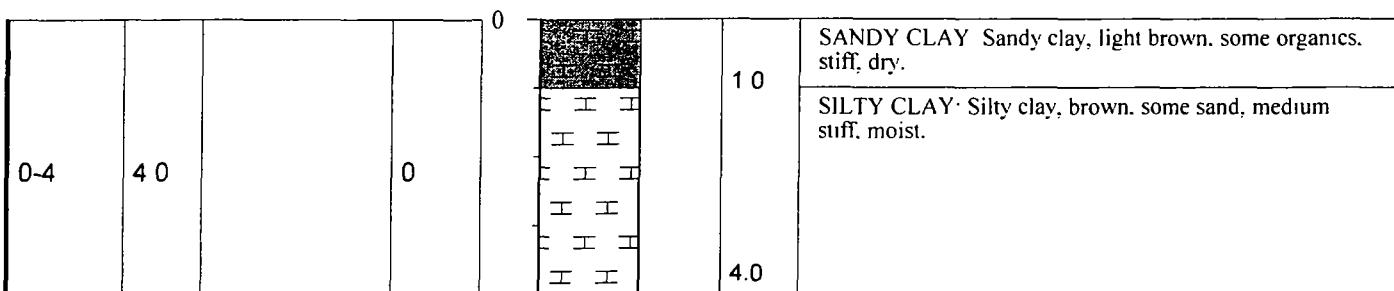
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/17/02

DRILLING CO Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 696008 N 910496.2

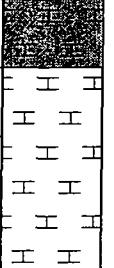
GROUND SURFACE ELEVATION: 625.07'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H H H H H		4.0	SANDY CLAY Sandy clay, light brown. some organics. stiff, dry. SILTY CLAY Silty clay, brown. some sand, medium stiff, moist.



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **NA-5**TOTAL DEPTH: **4 feet**

PROJECT:	Eagle Zinc	DRILLING CO.:	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO :	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	07/17/02	HAMMER WT /DROP	--
SURVEY LOCATION:	E 696208 N 910496.2	GROUND SURFACE ELEVATION:	627.52'
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	SOIL DESCRIPTION

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PIID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	
0-4	4.0		0	0			10	SANDY CLAY: Sandy clay. light brown, some organics. stiff. dry

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GEOLOGIC DRILL LOG

BOREHOLE NO.: NA-6

TOTAL DEPTH: 4 feet

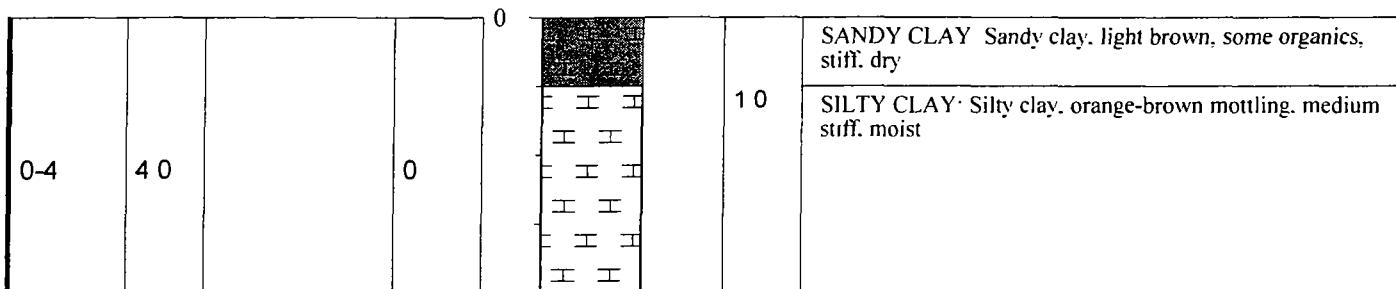
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY J. Fraser, C. Greco
DATES DRILLED 07/17/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP: --

SURVEY LOCATION: E 696358 N 910346.2

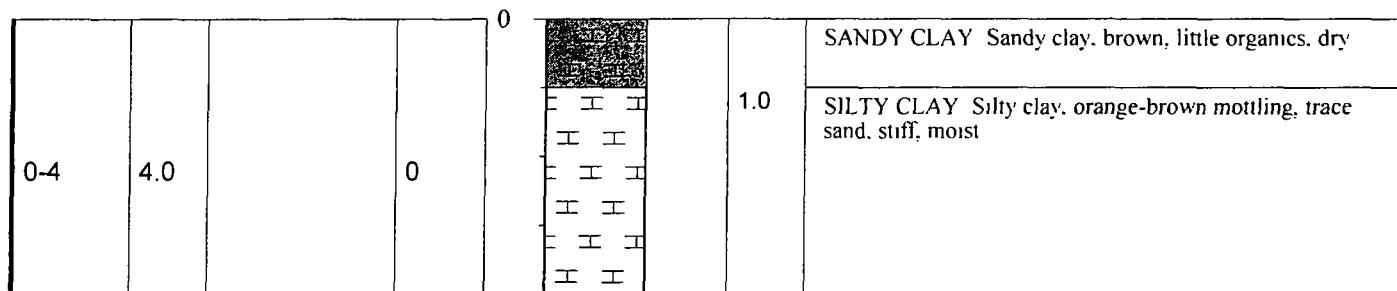
GROUND SURFACE ELEVATION: 629.16'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H		1.0	SANDY CLAY Sandy clay, light brown, some organics, stiff, dry



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **NA-7**TOTAL DEPTH: **4 feet**PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED. **07/17/02**DRILLING CO : **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING. **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**SURVEY LOCATION: **E 695734.9 N 910272.3**GROUND SURFACE ELEVATION: **627.68'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H H H H H H H H H		1.0	SANDY CLAY Sandy clay. brown, little organics. dry SILTY CLAY Silty clay. orange-brown mottling, trace sand. stiff, moist

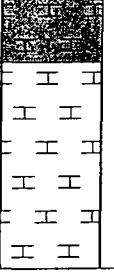


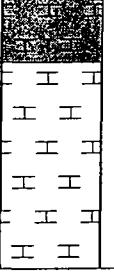
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: NA-8****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/17/02**

DRILLING CO.: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP: **--**

SURVEY LOCATION: E696187.9 N 910246.3**GROUND SURFACE ELEVATION: 623.08'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4 0	S-NA-8-2	0	0			0-4	SANDY CLAY: Sandy clay, light brown, organics, dry

0-4	4 0	S-NA-8-2	0	0			0-4	SANDY CLAY: Sandy clay, light brown, organics, dry
				10			10	SILTY CLAY: Silty clay, brown mottling, stiff, moist

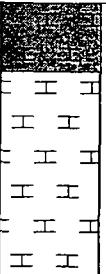
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: NA-9****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/17/02**

DRILLING CO: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP: **--**

SURVEY LOCATION: E 696058 N 910046.2**GROUND SURFACE ELEVATION: 629.4'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

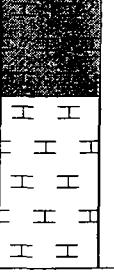
0-4	40	S-NA-9-2 S-NA-9-2D	0	0			1.0	SANDY CLAY: Sandy clay. light brown, organics.stiff. dry. SILTY CLAY: Silty clay. orange-brown mottling. trace sands. stiff, moist
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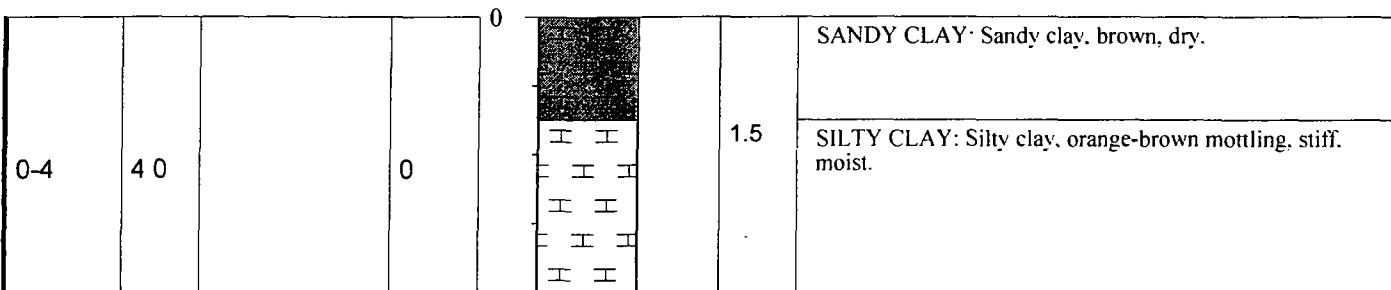
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: NA-10****TOTAL DEPTH: 4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/17/02**

DRILLING CO. **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT./DROP **--**

SURVEY LOCATION: E 696465.8 N 910046.2**GROUND SURFACE ELEVATION: 627.38'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			1.5	SANDY CLAY: Sandy clay, brown, dry. SILTY CLAY: Silty clay, orange-brown mottling, stiff, moist.



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740 Waukegan Rd., Suite 401
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GEOLOGIC DRILL LOG

BOREHOLE NO.: MA-1

TOTAL DEPTH: 4 feet

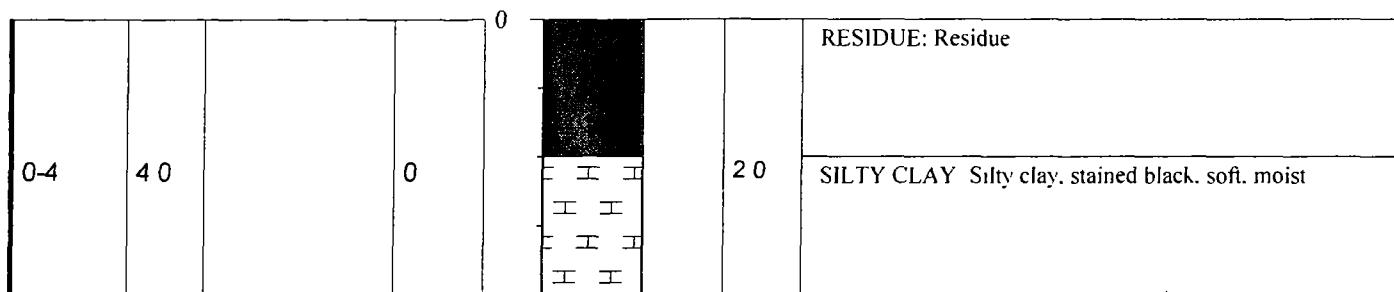
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO.: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/17/02

DRILLING CO.: Philips
RIG TYPE: Direct Push
METHOD OF DRILLING: Geoprobe
SAMPLING METHODS: Macro-core Sampler
HAMMER WT./DROP --

SURVEY LOCATION: E 695739.8, N 909920.5

GROUND SURFACE ELEVATION: 631.89'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0	H H H H H H H H		2.0	RESIDUE: Residue SILTY CLAY Silty clay, stained black, soft, moist



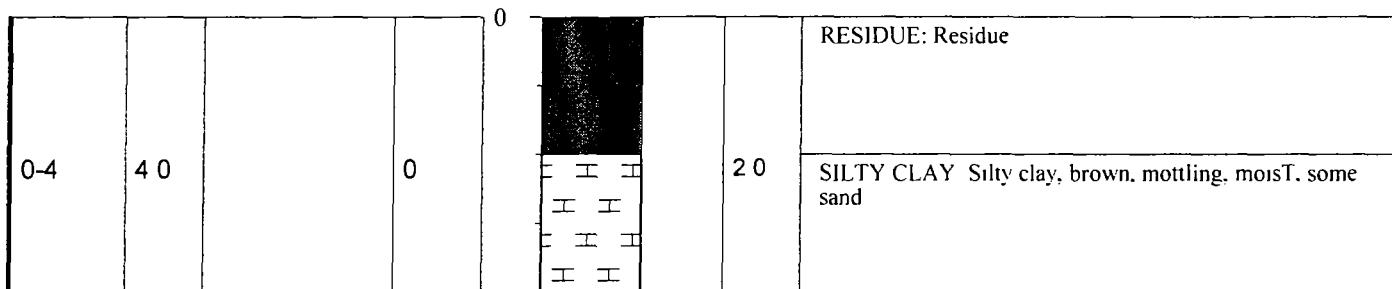
ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **MA-2**TOTAL DEPTH: **4 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION: **Hillsboro, IL**
JOB NO. **21-7400E**
LOGGED BY: **J. Fraser, C. Greco**
DATES DRILLED: **07/17/02**

DRILLING CO.: **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: **E 696189.8, N 908570.5**GROUND SURFACE ELEVATION: **629.46'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4 0		0	0	H H H H		2 0	RESIDUE: Residue SILTY CLAY Silty clay, brown, mottling, moist, some sand



ENVIRON

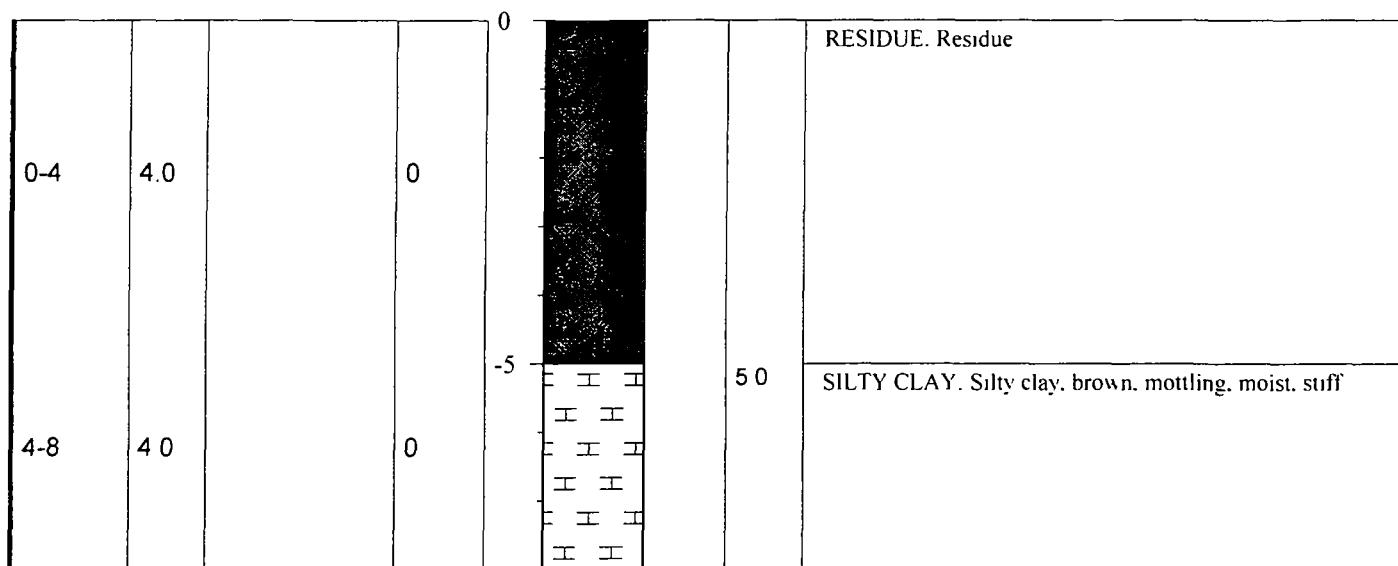
740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

BOREHOLE NO.: MA-3

TOTAL DEPTH: 8 feet

PROJECT SITE LOCATION JOB NO. LOGGED BY DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/17/02	DRILLING CO RIG TYPE: METHOD OF DRILLING: SAMPLING METHODS: HAMMER WT /DROP	Philips Direct Push Geoprobe Macro-core Sampler --					
SURVEY LOCATION: E 695839.8, N 909620.5		GROUND SURFACE ELEVATION: 632.28'						
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION



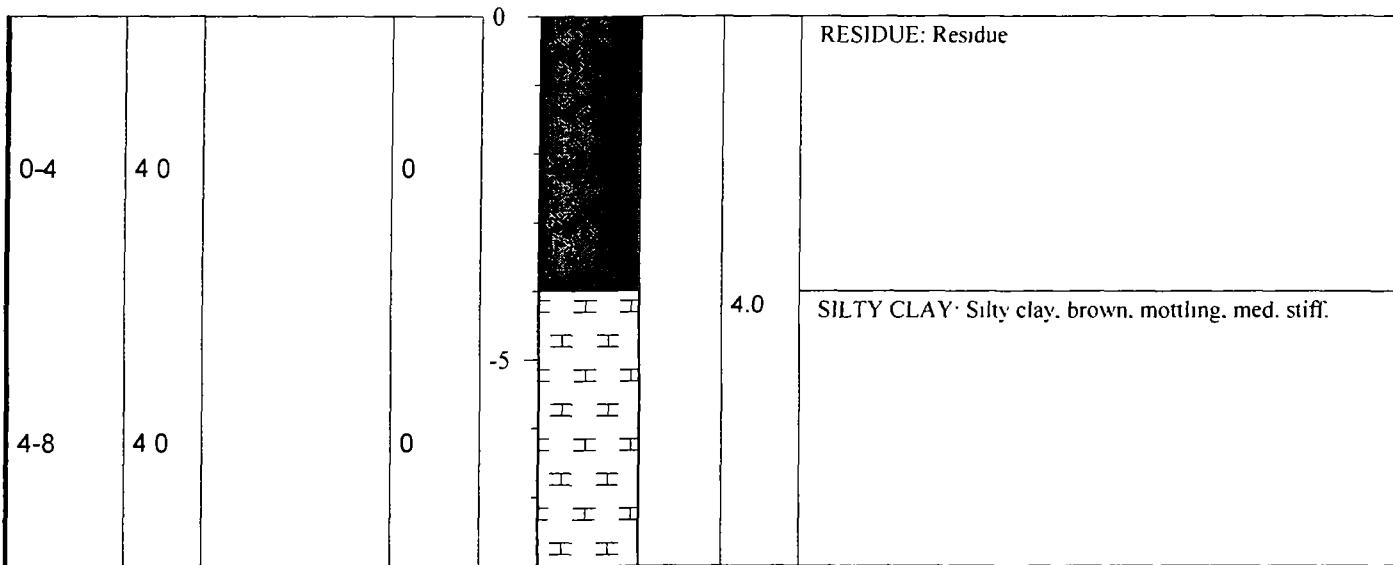
ENVIRON740 Waukegan Rd , Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: MA-4****TOTAL DEPTH: 8 feet**

PROJECT: **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED **07/17/02**

DRILLING CO.. **Philips**
RIG TYPE: **Direct Push**
METHOD OF DRILLING: **Geoprobe**
SAMPLING METHODS: **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: **E 695989.8, N 909258.1**GROUND SURFACE ELEVATION: **634.62'**

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			4.0	RESIDUE: Residue
4-8	4.0		0	-5			4.0	SILTY CLAY: Silty clay, brown, mottling, med. stiff.



ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG****BOREHOLE NO.: MA-5****TOTAL DEPTH: 4 feet**

PROJECT	Eagle Zinc	DRILLING CO	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY:	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED	07/17/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 696189.8, N 909270.5

GROUND SURFACE ELEVATION: 631.96

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			2 0	RESIDUE Residue

0-4	4.0		0	0			2 0	RESIDUE Residue
								SILTY CLAY Silty clay, brown, mottling, moist.

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GEOLOGIC DRILL LOG

BOREHOLE NO.: MA-6

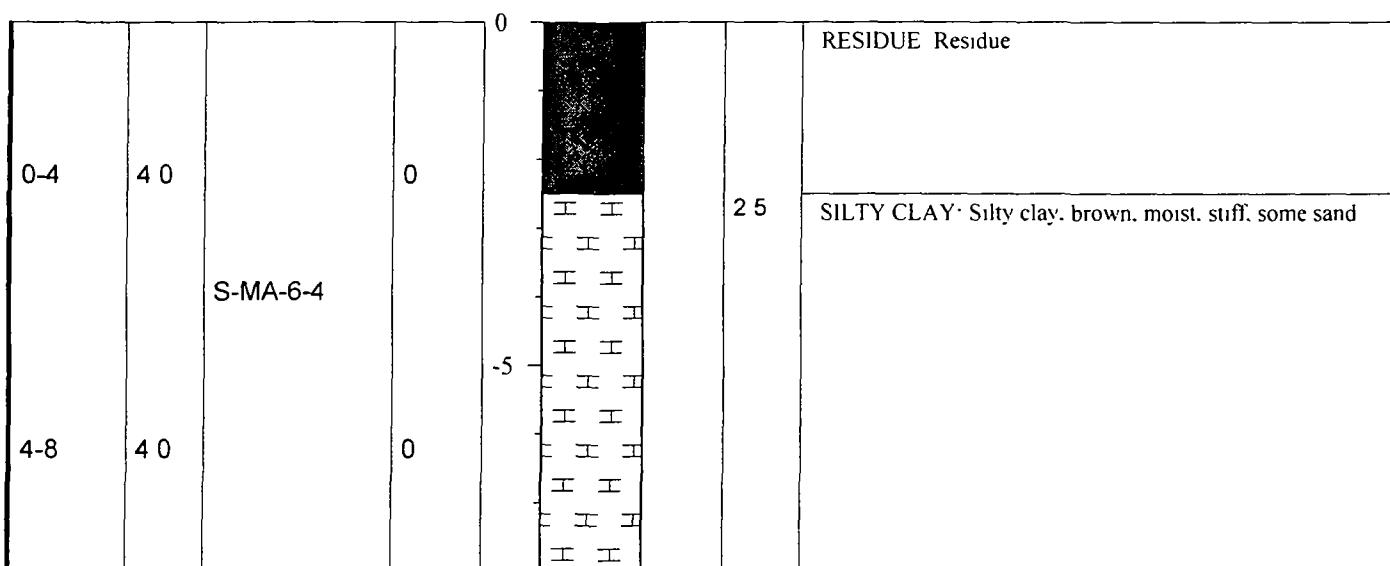
TOTAL DEPTH: 8 feet

PROJECT.	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE:	Direct Push
JOB NO.	21-7400E	METHOD OF DRILLING	Geoprobe
LOGGED BY	J. Fraser, C. Greco	SAMPLING METHODS	Macro-core Sampler
DATES DRILLED.	07/17/02	HAMMER WT./DROP	--

SURVEY LOCATION: E 695954.9, N 909005

GROUND SURFACE ELEVATION: 633.22'

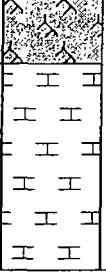
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION

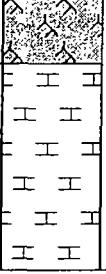


ENVIRON740 Waukegan Rd., Suite 401
Deerfield, Illinois 60015**GEOLOGIC DRILL LOG**BOREHOLE NO.: **MA-7**TOTAL DEPTH: **4 feet**PROJECT: **Eagle Zinc**
SITE LOCATION **Hillsboro, IL**
JOB NO.: **21-7400E**
LOGGED BY **J. Fraser, C. Greco**
DATES DRILLED **07/17/02**DRILLING CO **Philips**
RIG TYPE **Direct Push**
METHOD OF DRILLING **Geoprobe**
SAMPLING METHODS **Macro-core Sampler**
HAMMER WT /DROP **--**

SURVEY LOCATION: E 696263.8, N 908820.5

GROUND SURFACE ELEVATION: 627.02'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			0-4	TOPSOIL. Top soil. organics.

0-4	4.0		0	0			10	SILTY CLAY Silty clay, brown with orange-brown motting, moist
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GEOLOGIC DRILL LOG

BOREHOLE NO.: MA-8

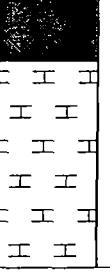
TOTAL DEPTH: 4 feet

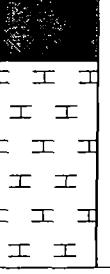
PROJECT: Eagle Zinc
SITE LOCATION: Hillsboro, IL
JOB NO: 21-7400E
LOGGED BY: J. Fraser, C. Greco
DATES DRILLED: 07/17/02

DRILLING CO. Philips
RIG TYPE Direct Push
METHOD OF DRILLING Geoprobe
SAMPLING METHODS Macro-core Sampler
HAMMER WT /DROP --

SURVEY LOCATION: E 695989.8, N 908756.9

GROUND SURFACE ELEVATION: 631.89'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0	S-MA-8-2	0	0			1 0	RESIDUE Residue SILTY CLAY Silty clay, brown, mottling, some sand, moist

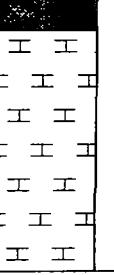
0-4	4.0	S-MA-8-2	0	0			1 0	RESIDUE Residue SILTY CLAY Silty clay, brown, mottling, some sand, moist
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOGBOREHOLE NO.: **MA-9**TOTAL DEPTH: **4 feet**

PROJECT SITE LOCATION: JOB NO LOGGED BY: DATES DRILLED	Eagle Zinc Hillsboro, IL 21-7400E J. Fraser, C. Greco 07/17/02	DRILLING CO RIG TYPE METHOD OF DRILLING: SAMPLING METHODS HAMMER WT./DROP	Philips Direct Push Geoprobe Macro-core Sampler --
SURVEY LOCATION:	E 695989.8, N 908605.1 GROUND SURFACE ELEVATION: 632.94'		
SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm) DEPTH (ft) GRAPHIC LOG USCS LAYER DEPTH (ft) SOIL DESCRIPTION

0-4	40	S-MA-9-2	0	0		0.5	RESIDUE: Residue SILTY CLAY Silty clay, brown with mottling, some sand, medium stiff
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Deerfield, Illinois 60015

GEOLOGIC DRILL LOG

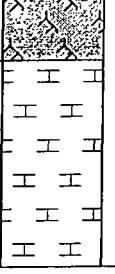
BOREHOLE NO.: MA-10

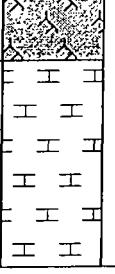
TOTAL DEPTH: 4 feet

PROJECT	Eagle Zinc	DRILLING CO.	Philips
SITE LOCATION	Hillsboro, IL	RIG TYPE.	Direct Push
JOB NO.	2J-7400E	METHOD OF DRILLING.	Geoprobe
LOGGED BY.	J. Fraser, C. Greco	SAMPLING METHODS.	Macro-core Sampler
DATES DRILLED	07/17/02	HAMMER WT /DROP	--

SURVEY LOCATION: E 6963898, N 908570.5

GROUND SURFACE ELEVATION: 624.98'

SS INTERVAL (ft)	SS RECOVERY (ft)	SAMPLE ID	PID (ppm)	DEPTH (ft)	GRAPHIC LOG	USCS	LAYER DEPTH (ft)	SOIL DESCRIPTION
0-4	4.0		0	0			1.0	TOPSOIL: Top soil, organics SILTY CLAY Silty clay, brown with orange-brown mottling, moist

0-4	4.0		0	0			1.0	TOPSOIL: Top soil, organics SILTY CLAY Silty clay, brown with orange-brown mottling, moist
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A P P E N D I X C

Raw XRF Screening Data

Appendix C: XRF Data for the Manufacturing Area

(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	
54	A1-1	2	07/16/02	<LOD		47.1	155.2	37.5	<LOD	37.05	<LOD	75.75	<LOD	51.45	<LOD	25.35	<LOD	43.2	<LOD	27.45	502	130	<LOD
57	A1-1	4	07/16/02	<LOD		40.8	212.6	37.5	47.8	23	134	57.6	<LOD	44.25	<LOD	24.6	<LOD	34.95	<LOD	31.05	1109.6	150	<LOD
53	A1-2	4	07/16/02	<LOD		45	138.9	32.6	50.4	24.1	143.7	61.3	<LOD	43.2	<LOD	23.4	<LOD	32.7	<LOD	27.9	604.8	120	<LOD
50	A1-2	6	07/16/02	<LOD		42.75	123.5	32.3	<LOD	33.6	112.5	57.9	<LOD	45	<LOD	23.7	<LOD	37.65	<LOD	30.75	<LOD	117.75	<LOD
44	A1-3	7	07/15/02	<LOD		45	92.2	30.3	<LOD	36	180.5	72.8	<LOD	54	<LOD	22.2	<LOD	40.5	<LOD	34.05	1040	180	<LOD
47	A1-3	9	07/15/02	<LOD		55.35	<LOD	56.55	<LOD	50.7	<LOD	132.6	<LOD	98.1	<LOD	32.85	<LOD	71.1	<LOD	48.75	3888	520	<LOD
62	A1-4	2	07/16/02	<LOD		45	211.6	38.3	41.1	22.7	146.3	60.7	<LOD	49.5	<LOD	26.4	<LOD	40.8	<LOD	23.25	210.6	86.3	<LOD
65	A1-4	4	07/16/02	<LOD		48	183	37.2	<LOD	33.75	141.3	62.2	<LOD	56.25	<LOD	19.2	<LOD	40.2	<LOD	29.4	838.4	140	<LOD
58	A1-5	2	07/16/02	<LOD		41.25	173.5	33.6	37.3	21.3	168.3	61.8	<LOD	39.6	<LOD	19.2	<LOD	38.85	<LOD	32.1	1739.2	190	<LOD
61	A1-5	4	07/16/02	<LOD		45.9	214.4	37.7	61.4	24.4	109.3	53.1	<LOD	50.4	<LOD	13.35	<LOD	36.6	<LOD	26.4	1060	150	<LOD
38	A1-6	9	07/15/02	<LOD		44.4	63.9	25.9	<LOD	32.85	119.1	59.6	<LOD	52.2	<LOD	28.95	<LOD	45.75	<LOD	48.45	9068.8	630	<LOD
41	A1-6	11	07/15/02	<LOD		45.15	69.9	34.4	69.4	34.5	<LOD	101.55	<LOD	71.4	<LOD	32.55	<LOD	54.6	<LOD	42.45	1340	240	<LOD
11	A1-7	3	07/15/02	<LOD		47.1	119.9	32.9	48.5	25.6	159.9	68.3	<LOD	66.9	<LOD	23.85	<LOD	62.25	<LOD	40.2	4748.8	400	<LOD
16	A1-7	4	07/15/02	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
91	A1-8	2	07/16/02	<LOD		44.1	198.6	38.9	<LOD	31.5	156.4	65	<LOD	49.65	<LOD	23.55	<LOD	37.65	<LOD	24.15	1349.6	180	<LOD
95	A1-8	3	07/16/02	<LOD		56.55	215.8	46.2	67.1	30.7	154.9	74.4	<LOD	57.3	<LOD	22.5	<LOD	47.4	<LOD	42.15	2068.8	260	<LOD
96	A1-8	4	07/16/02	<LOD		96.9	204.6	75	<LOD	69.3	220.8	140	<LOD	85.35	<LOD	52.95	<LOD	73.65	<LOD	72.3	2520	490	<LOD
123	A1-9	3	07/16/02	<LOD		49.2	221.6	40.8	53.4	25.1	211.8	74	<LOD	53.55	<LOD	22.05	<LOD	40.35	<LOD	29.85	2379.2	240	<LOD
124	A1-9	5	07/16/02	<LOD		42.15	158.4	35.9	<LOD	31.5	165.7	68.3	124.5	57.9	<LOD	25.35	<LOD	66	<LOD	39	2849.6	280	<LOD
74	A1-10	3	07/16/02	<LOD		47.7	254.8	43.8	72.1	27.4	146.8	63.9	<LOD	46.2	<LOD	25.2	<LOD	40.8	<LOD	32.85	979.2	150	<LOD
76	A1-10	4	07/16/02	<LOD		45.45	241.8	38.4	62.5	23.7	128.5	54.5	<LOD	37.35	<LOD	21.3	<LOD	34.05	<LOD	23.7	1209.6	150	<LOD
79	A1-11	2	07/16/02	<LOD		44.4	224.6	37.6	34.4	20.8	150	58.6	<LOD	51	<LOD	14.85	<LOD	38.1	<LOD	26.55	1149.6	150	<LOD
80	A1-11	4	07/16/02	<LOD		46.8	229.4	39.4	46.1	23	137.4	58.7	<LOD	42	<LOD	22.95	<LOD	34.95	<LOD	27.75	1409.6	180	<LOD
30	A1-12	4	07/15/02	<LOD		44.4	134.5	33.3	<LOD	34.5	179.1	69.9	<LOD	47.7	<LOD	24.15	<LOD	41.4	<LOD	37.8	2388.8	250	<LOD
31	A1-12	6	07/15/02	<LOD		41.55	140.1	31.6	34	21.4	155.9	61.3	<LOD	50.1	<LOD	20.1	<LOD	43.2	<LOD	28.95	2459.2	240	<LOD
70	A1-13	2	07/16/02	<LOD		42.6	170.2	36.6	40.6	23.9	160.1	66.5	<LOD	47.55	<LOD	23.85	<LOD	39.6	<LOD	34.5	1988.8	220	<LOD
73	A1-13	4	07/16/02	<LOD		49.35	122.6	33	<LOD	32.25	99.6	56.5	<LOD	57	<LOD	24.15	<LOD	43.2	<LOD	28.65	1680	210	<LOD
83	A1-14	6	07/16/02	<LOD		46.05	228.6	39.2	53.7	23.9	123.9	56.3	<LOD	50.1	<LOD	21.3	<LOD	40.2	<LOD	22.95	1520	180	<LOD
84	A1-14	8	07/16/02	<LOD		42.75	206.6	36.5	51.2	23	114.8	53.3	<LOD	52.2	<LOD	20.4	<LOD	43.2	<LOD	29.7	1800	190	<LOD
87	A1-15	11	07/16/02	<LOD		50.25	102.5	31	<LOD	32.25	98.4	56.7	<LOD	50.1	<LOD	25.2	<LOD	45.45	<LOD	33.9	2828.8	290	<LOD
88	A1-15	12	07/16/02	<LOD		37.35	87.8	28.2	43.6	23.7	184.4	69.3	<LOD	48.15	<LOD	23.4	<LOD	40.8	<LOD	28.2	618.4	130	<LOD
26	A1-16	9	07/15/02	<LOD		45.3	57.7	28.3	66	29.7	224.4	84.4	<LOD	53.4	<LOD	29.85	<LOD	48	<LOD	37.5	1449.6	210	<LOD
28	A1-16	11	07/15/02	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
20	A1-17	5	07/15/02	<LOD		44.7	113.5	32.9	<LOD	36.75	112.5												

Appendix C: XRF Data for the Manufacturing Area
(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cu Error	Ni	Ni Error	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs
54	A1-1	2	07/16/02	225 <LOD			360 <LOD	420	6499.2	780 <LOD		645 <LOD	660 <LOD	1050 <LOD	19.35 <LOD			420 <LOD			
57	A1-1	4	07/16/02	210 <LOD			270 <LOD	480	14400	1100 <LOD		780 <LOD	735 <LOD	510 <LOD	195 <LOD			420 <LOD			
53	A1-2	4	07/16/02	180 <LOD			240 <LOD	540	18099.2	1300 <LOD		885 <LOD	735 <LOD	825 <LOD	141.3 <LOD			345 <LOD			
50	A1-2	6	07/16/02	195 <LOD			285 <LOD	465	10400	980 <LOD		765 <LOD	705 <LOD	1304.4 <LOD	112.65 <LOD			345 <LOD			
44	A1-3	7	07/15/02	300	2499.2		370 <LOD	525	12499.2	1100 <LOD		855 <LOD	780 <LOD	345 <LOD	19.8 <LOD			450 <LOD			
47	A1-3	9	07/15/02	525	2960		570 <LOD	600	7436.8	1200 <LOD		975 <LOD	1185 <LOD	675 <LOD	180 <LOD			330 <LOD			
62	A1-4	2	07/16/02	180 <LOD			285 <LOD	405	8396.8	800 <LOD		705 <LOD	735 <LOD	900 <LOD	15.9 <LOD			405 <LOD			
65	A1-4	4	07/16/02	195 <LOD			270 <LOD	555	17292.8	1300 <LOD		900 <LOD	795 <LOD	615 <LOD	14.7 <LOD			345 <LOD			
58	A1-5	2	07/16/02	225 <LOD			270 <LOD	555	21299.2	1400 <LOD		960 <LOD	840 <LOD	1095 <LOD	315 <LOD			615 <LOD			
61	A1-5	4	07/16/02	225 <LOD			300 <LOD	540	16396.8	1200 <LOD		825 <LOD	720 <LOD	870 <LOD	315 <LOD			465 <LOD			
38	A1-6	9	07/15/02	420	412		240 <LOD	525	15193.6	1300 <LOD		930 <LOD	855 <LOD	810 <LOD	270 <LOD			780 <LOD			
41	A1-6	11	07/15/02	360	1840		410 <LOD	525	9107.2	1100 <LOD		915 <LOD	1020 <LOD	960 <LOD	57.75 <LOD			210 <LOD			
11	A1-7	3	07/15/02	360 <LOD			345 <LOD	750	30694.4	2099.2	2428.8	920 <LOD	1050 NA		NA			NA			
16	A1-7	4	07/15/02		NA					NA		NA		<LOD	900 <LOD	57.75 <LOD		2400 <LOD			
91	A1-8	2	07/16/02	255 <LOD			315 <LOD	450	8934.4	889.6	1729.6	600 <LOD	750 <LOD	1260 <LOD	23.25 <LOD			555 <LOD			
95	A1-8	3	07/16/02	300 <LOD			390 <LOD	615	16499.2	1500 <LOD		945 <LOD	885 <LOD	705 <LOD	43.95 <LOD			390 <LOD			
96	A1-8	4	07/16/02	615	2720		710 <LOD	1334.4	28390.4	3699.2 <LOD		2100 <LOD	2100 <LOD	870 <LOD	19.65 <LOD			585 <LOD			
123	A1-9	3	07/16/02	255 <LOD			270 <LOD	555	17395.2	1300 <LOD		915 <LOD	825 <LOD	1215 <LOD	18.6 <LOD			360 <LOD			
124	A1-9	5	07/16/02	300	862.4		270 <LOD	585	18790.4	1500 <LOD		945 <LOD	945 <LOD	1170 <LOD	19.35 <LOD			330 <LOD			
74	A1-10	3	07/16/02	210 <LOD			300 <LOD	510	15398.4	1200 <LOD		825 <LOD	780 <LOD	780 <LOD	150 <LOD			465 <LOD			
76	A1-10	4	07/16/02	210 <LOD			255 525.2	340	16192	1200 <LOD		810 <LOD	675 <LOD	540 <LOD	165 <LOD			495 <LOD			
79	A1-11	2	07/16/02	195 <LOD			270 <LOD	495	14489.6	1100 <LOD		795 <LOD	720 <LOD	615 <LOD	133.2 <LOD			330 <LOD			
80	A1-11	4	07/16/02	225 <LOD			315 <LOD	555	16998.4	1300 <LOD		885 <LOD	735 <LOD	375 <LOD	255 <LOD			405 <LOD			
30	A1-12	4	07/15/02	255 <LOD			300 <LOD	690	28083.2	2000 <LOD		1125 <LOD	975 <LOD	555 <LOD	13.2 <LOD			210 <LOD			
31	A1-12	6	07/15/02	240 <LOD			255 <LOD	495	17600	1300 <LOD		855 <LOD	795 <LOD	855 <LOD	165 <LOD			465 <LOD			
70	A1-13	2	07/16/02	255 <LOD			315 <LOD	525	14092.8	1200	1409.6	650 <LOD	900 <LOD	690 <LOD	20.4 <LOD			435 <LOD			
73	A1-13	4	07/16/02	285 478.4			250 <LOD	585	15590.4	1300	1240	680 <LOD	915 <LOD	750 <LOD	150 <LOD			360 <LOD			
83	A1-14	6	07/16/02	210 <LOD			225 <LOD	510	17600	1300 <LOD		870 <LOD	780 <LOD	960 <LOD	375 <LOD			480 <LOD			
84	A1-14	8	07/16/02	240 <LOD			270 <LOD	495	17792	1300 <LOD		855 <LOD	720 <LOD	690 <LOD	210 <LOD			435 <LOD			
87	A1-15	11	07/16/02	300 <LOD			330 <LOD	585	19097.6	1500 <LOD		990 <LOD	900 <LOD	1244.4 <LOD	195 <LOD			315 <LOD			
88	A1-15	12	07/16/02	225 326.4			210 <LOD	420	8454.4	840 <LOD		645 <LOD	645 <LOD	1185 <LOD	210 <LOD			375 <LOD			
26	A1-16	9	07/15/02	285 <LOD			360 <LOD	420	8544	940	983.2	580 <LOD	780 <LOD	510 <LOD	14.1 <LOD			300 <LOD			
28	A1-16	11	07/15/02		NA					NA		NA		<LOD	735 <LOD	21.15 <LOD		495 <LOD			
20	A1-17	5	07/15/02	330 <LOD			375 <LOD	615	16499.2	1400	1360	710 <LOD	915 <LOD	855 <LOD	180 <LOD			420 <LOD			
22	A1-17	8	07/15/02	255 <LOD			345 <LOD	600	18099.2	1500 <LOD		1005 <LOD	855 <LOD	840 <LOD	17.1 <LOD			510 <LOD			
103	A1-19	13	07/16/02	195 <LOD			300 <LOD	480	12499.2	1100 <LOD		750 <LOD	780 <LOD	465 <LOD	14.55 <LOD			270 <LOD			
104	A1-19	15	07/16/02	210 728.4			240 <LOD	480	13299.2	1100 <LOD		765 <LOD	780 <LOD	900 <LOD	390 <LOD			615 <LOD			
66	A1-20	2	07/16/02	225 <LOD			300 <LOD	435	12499.2	1000 <LOD		750 <LOD	705 <LOD								

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cs Error	Te	Te Error	Sb	Sb Error	Sn	Sn Error	Cd	Cd Error	Ag	Ag Error	Pd	Pd Error
54	A1-1	2	07/16/02	165 <LOD	48.3 <LOD	56.85 <LOD	780 <LOD	225 <LOD	300 <LOD	134.1						
57	A1-1	4	07/16/02	225 <LOD	180 <LOD	36.75 <LOD	675 <LOD	27.15 <LOD	210 <LOD	74.4						
53	A1-2	4	07/16/02	165 <LOD	117.75 <LOD	40.2 <LOD	615 <LOD	102.45 <LOD	225 <LOD	66.45						
50	A1-2	6	07/16/02	21 <LOD	21.3 <LOD	40.05 <LOD	750 <LOD	148.2 <LOD	360 <LOD	10.65						
44	A1-3	7	07/15/02	180 <LOD	50.85 <LOD	41.25 <LOD	870 <LOD	36.75 <LOD	330 <LOD	29.7						
47	A1-3	9	07/15/02	165 <LOD	210 <LOD	150 <LOD	720 <LOD	30.6 <LOD	300 <LOD	56.25						
62	A1-4	2	07/16/02	195 <LOD	20.55 <LOD	26.85 <LOD	615 <LOD	8.7 <LOD	270 <LOD	90.6						
65	A1-4	4	07/16/02	33.15 <LOD	150 <LOD	35.25 <LOD	600 <LOD	91.65 <LOD	180 <LOD	60.75						
58	A1-5	2	07/16/02	180 <LOD	69 <LOD	180 <LOD	840 <LOD	150 <LOD	285 <LOD	104.1						
61	A1-5	4	07/16/02	46.35 <LOD	165 <LOD	180 <LOD	645 <LOD	143.25 <LOD	255 <LOD	93.9						
38	A1-6	9	07/15/02	225 <LOD	61.2 <LOD	225 <LOD	870 <LOD	225 <LOD	300 <LOD	35.85						
41	A1-6	11	07/15/02	24.15 <LOD	141.45 <LOD	59.1 <LOD	585 <LOD	6.15 <LOD	195 <LOD	5.4						
11	A1-7	3	07/15/02	NA	NA	NA	NA	NA	NA	NA						
16	A1-7	4	07/15/02	1484.4 <LOD	97.95 <LOD	94.35 <LOD	2700 <LOD	30.9 <LOD	330 <LOD	7.65						
91	A1-8	2	07/16/02	50.25 <LOD	285 <LOD	47.25 <LOD	1050 <LOD	55.2 <LOD	240 <LOD	6.9						
95	A1-8	3	07/16/02	140.85 <LOD	225 <LOD	34.2 <LOD	705 <LOD	8.1 <LOD	240 <LOD	6.6						
96	A1-8	4	07/16/02	285 <LOD	195 <LOD	285 <LOD	750 <LOD	10.5 <LOD	180 <LOD	103.65						
123	A1-9	3	07/16/02	270 <LOD	225 <LOD	42.75 <LOD	765 <LOD	33.6 <LOD	390 <LOD	111.9						
124	A1-9	5	07/16/02	42.15 <LOD	180 <LOD	74.1 <LOD	735 <LOD	330 <LOD	165 <LOD	29.4						
74	A1-10	3	07/16/02	133.8 <LOD	90.3 <LOD	128.25 <LOD	645 <LOD	8.55 <LOD	195 <LOD	68.7						
76	A1-10	4	07/16/02	138.45 <LOD	20.1 <LOD	34.5 <LOD	705 <LOD	121.35 <LOD	195 <LOD	75						
79	A1-11	2	07/16/02	110.1 <LOD	108 <LOD	111.6 <LOD	525 <LOD	91.05 <LOD	165 <LOD	60.3						
80	A1-11	4	07/16/02	142.95 <LOD	40.95 <LOD	107.7 <LOD	600 <LOD	38.7 <LOD	210 <LOD	110.4						
30	A1-12	4	07/15/02	195 <LOD	18.3 <LOD	101.55 <LOD	555 <LOD	7.8 <LOD	255 <LOD	69.15						
31	A1-12	6	07/15/02	137.85 <LOD	19.95 <LOD	27.15 <LOD	630 <LOD	8.25 <LOD	195 <LOD	74.7						
70	A1-13	2	07/16/02	210 <LOD	165 <LOD	68.7 <LOD	795 <LOD	240 <LOD	195 <LOD	52.8						
73	A1-13	4	07/16/02	35.55 <LOD	165 <LOD	125.7 <LOD	555 <LOD	100.95 <LOD	210 <LOD	6.3						
83	A1-14	6	07/16/02	180 <LOD	180 <LOD	180 <LOD	780 <LOD	88.35 <LOD	315 <LOD	39.45						
84	A1-14	8	07/16/02	27.15 <LOD	17.7 <LOD	30.9 <LOD	615 <LOD	100.95 <LOD	210 <LOD	6.3						
87	A1-15	11	07/16/02	165 <LOD	22.05 <LOD	165 <LOD	735 <LOD	134.7 <LOD	195 <LOD	6.45						
88	A1-15	12	07/16/02	32.4 <LOD	20.4 <LOD	165 <LOD	675 <LOD	135.9 <LOD	225 <LOD	7.2						
26	A1-16	9	07/15/02	112.5 <LOD	108.3 <LOD	165 <LOD	525 <LOD	5.7 <LOD	138.15 <LOD	3.6						
28	A1-16	11	07/15/02	285 <LOD	56.1 <LOD	285 <LOD	795 <LOD	330 <LOD	270 <LOD	33.3						
20	A1-17	5	07/15/02	210 <LOD	195 <LOD	38.4 <LOD	660 <LOD	118.65 <LOD	270 <LOD	7.95						
22	A1-17	8	07/15/02	210 <LOD	195 <LOD	165 <LOD	690 <LOD	180 <LOD	285 <LOD	10.2						
103	A1-19	13	07/16/02	165 <LOD	117.75 <LOD	32.25 <LOD	600 <LOD	99.6 <LOD	165 <LOD	5.1						
104	A1-19	15	07/16/02	56.7 <LOD	131.85 <LOD	131.1 <LOD	795 <LOD	77.7 <LOD	315 <LOD	27.9						
66	A1-20	2	07/16/02	180 <LOD	139.95 <LOD	149.4 <LOD	600 <LOD	210 <LOD	225 <LOD	8.25						
69	A1-20	4	07/16/02	37.5 <LOD	165 <LOD	37.65 <LOD	675 <LOD	32.85 <LOD	255 <LOD	26.7						
108	A1-21	21	07/16/02	29.1 <LOD	19.5 <LOD	150 <LOD	705 <LOD	8.4 <LOD	255 <LOD	7.05						
111	A1-21	22.5	07/16/02	20.85 <LOD	20.4 <LOD	29.85 <LOD	690 <LOD	7.65 <LOD	225 <LOD	6.15						
112	A1-21 DUP	22.5	07/16/02	32.25 <LOD	165 <LOD	32.25 <LOD	750 <LOD	12.3 <LOD	285 <LOD	150						
116	A1-23	7	07/16/02	225 <LOD	74.4 <LOD	225 <LOD	795 <LOD	330 <LOD	255 <LOD	127.5						
120	A1-23	8	07/16/02	147 <LOD	240 <LOD	40.35 <LOD	720 <LOD	119.85 <LOD	345 <LOD	78.75						
99	A1-24	10	07/16/02	33.6 <LOD	20.4 <LOD	165 <LOD	690 <LOD	26.4 <LOD	255 <LOD	6.9						
100	A1-24	12	07/16/02	195 <LOD	137.85 <LOD	195 <LOD	765 <LOD	28.5 <LOD	315 <LOD	23.4						
127	A1-25	2	07/16/02	300 <LOD	150 <LOD	165 <LOD	705 <LOD	129 <LOD	315 <LOD	9.3						
12																

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	Cu Error	Ni
266	A2-1	7	07/18/02	<LOD	41.7	219.4	37.8	46	22.6	106.6	52.3	<LOD	49.65	<LOD	21.3	<LOD	38.4	<LOD	27.3	294.2	91.3	<LOD	180	<LOD
271	A2-1	8	07/18/02	<LOD	48.75	181.6	39.5	67.8	28.1	112.9	60.1	<LOD	60.6	<LOD	22.65	<LOD	41.1	<LOD	28.8	293.8	100	<LOD	180	<LOD
273	A2-2	3	07/18/02	<LOD	35.55	285.2	33.8	56.9	18.9	136.1	45.5	<LOD	36.15	<LOD	18.3	<LOD	29.1	<LOD	22.2	842.4	110	<LOD	165	247.6
276	A2-2	4	07/18/02	<LOD	49.65	188.7	36.3	41.8	22.7	94.9	51.4	<LOD	48.6	<LOD	20.1	<LOD	36.75	<LOD	28.35	973.6	150	<LOD	195	<LOD
348	A2-3	2.5	07/18/02	<LOD	47.55	224.6	40	35.7	22.6	142.9	61.5	<LOD	41.85	<LOD	23.25	<LOD	38.1	<LOD	29.7	513.2	120	<LOD	195	<LOD
351	A2-3	4	07/18/02	<LOD	40.95	212.6	34.7	35.2	20	170.6	58.8	<LOD	35.85	<LOD	20.7	<LOD	34.2	<LOD	28.65	577.2	110	<LOD	165	<LOD
352	A2-4	5.5	07/18/02	<LOD	50.25	174.3	37.4	47.5	25.1	134.9	62.9	<LOD	55.2	<LOD	20.55	<LOD	41.85	<LOD	39	164.2	88.5	<LOD	195	<LOD
355	A2-4	8	07/18/02	<LOD	43.65	246	42	72	26.8	141.3	61.6	<LOD	41.25	<LOD	27.45	<LOD	34.5	<LOD	34.5	319.4	97.1	<LOD	180	<LOD
357	A2-5	7	07/18/02	<LOD	46.05	215.2	41.1	45.6	24.7	131.2	61.9	<LOD	39.3	<LOD	25.65	<LOD	41.55	<LOD	28.95	<LOD	113.4	<LOD	180	<LOD
360	A2-5	8	07/18/02	<LOD	45.3	180.2	36.9	80	27.7	105	55.2	<LOD	43.8	<LOD	19.5	<LOD	32.85	<LOD	32.85	<LOD	114.75	<LOD	180	<LOD
285	A2-6	3	07/18/02	<LOD	42.45	165.1	33.6	60.7	24.2	172.9	63.3	<LOD	48.6	<LOD	23.55	<LOD	35.25	<LOD	24.3	222.2	83.7	<LOD	165	<LOD
288	A2-6	4	07/18/02	<LOD	39.15	149.4	31.7	52	22.9	193.3	65.5	<LOD	29.7	<LOD	20.25	<LOD	35.25	<LOD	29.25	340.2	95.6	<LOD	180	505.2
289	A2-7	3	07/18/02	52.5	32.4	167.4	33.7	58.1	24	117.5	54.3	76.7	45.2	<LOD	28.05	<LOD	53.55	<LOD	32.25	588.4	120	<LOD	180	<LOD
292	A2-7	4	07/18/02	<LOD	47.55	189.1	39.3	97.4	30.6	108.3	58.1	<LOD	56.1	<LOD	25.05	<LOD	42.75	<LOD	26.7	156.5	84.8	<LOD	180	<LOD
313	A2-8	7	07/18/02	64.8	35	245.6	40	60.9	24.3	105.1	52.1	<LOD	43.05	<LOD	17.85	<LOD	33.6	<LOD	28.05	155.9	75.5	<LOD	165	<LOD
316	A2-8	8	07/18/02	<LOD	48.45	228.2	42.6	50.6	25.5	134.5	62.9	<LOD	43.5	<LOD	16.95	<LOD	35.55	<LOD	22.65	350	110	<LOD	195	<LOD
301	A2-9	2	07/18/02	<LOD	44.25	172.1	35.2	<LOD	30	109.1	54.5	<LOD	44.25	<LOD	17.4	<LOD	39.15	<LOD	31.35	409.2	110	<LOD	195	552.4
306	A2-9	4	07/18/02	<LOD	46.95	208	38.4	59.6	25.1	83.8	50.1	<LOD	62.25	<LOD	21.15	<LOD	46.95	<LOD	32.7	174.9	84.9	<LOD	195	<LOD
303	A2-9-DUP	2	07/18/02	<LOD	49.8	235.2	43.2	79.2	28.9	135.9	63.5	<LOD	45.6	<LOD	24.15	<LOD	39.6	<LOD	35.4	321.4	100	<LOD	195	<LOD
308	A2-9-DUP	4	07/18/02	<LOD	51.75	215.4	39.7	92.2	28.9	175.4	67.4	<LOD	69.45	<LOD	32.55	<LOD	57.9	<LOD	34.65	358.6	100	<LOD	195	<LOD
297	A2-10	3	07/18/02	<LOD	37.5	167	31.6	40.5	20.7	158.2	57.4	<LOD	51.9	<LOD	16.2	<LOD	40.95	<LOD	26.7	1249.6	150	<LOD	210	<LOD
300	A2-10	4	07/18/02	<LOD	51.75	225.8	43.4	68.8	28.3	161.6	69.3	<LOD	52.8	<LOD	23.85	<LOD	39.6	<LOD	25.95	174.5	92.7	<LOD	210	<LOD
293	A2-11	3	07/18/02	<LOD	47.55	238.2	41.6	61.8	25.9	143.2	62.3	<LOD	54.75	<LOD	25.05	<LOD	42.75	<LOD	33.45	291.2	95.7	<LOD	180	<LOD
296	A2-11	4	07/18/02	<LOD	42.6	198.8	36.2	66.8	24.8	133.2	56.9	<LOD	43.65	<LOD	24.3	<LOD	39	<LOD	29.85	1549.6	180	<LOD	225	<LOD
369	A2-12	2	07/18/02	<LOD	40.05	187.3	33.7	71.8	24.1	138.6	55.1	<LOD	39.45	<LOD	18.45	<LOD	30.45	<LOD	24.3	913.6	130	<LOD	180	<LOD
372	A2-12	4	07/18/02	<LOD	47.1	216.4	41.8	72.6	28.3	91.6	55.1	<LOD	52.5	<LOD	30.6	<LOD	46.35	<LOD	35.1	149.3	88.4	<LOD	210	<LOD
365	A2-13	2	07/18/02	<LOD	50.4	255.8	50.6	<LOD	39.9	113	66.3	<LOD	44.4	<LOD	24.3	<LOD	41.1	<LOD	32.55	460.4	140	<LOD	270	<LOD
368	A2-13	4	07/18/02	<LOD	41.4	203.1	36.6	73	25.5	126.8	55.9	<LOD	56.25	<LOD	20.7	<LOD	42.45	<LOD	26.25	<LOD	106.8	<LOD	165	<LOD
317	A2-14	6.5	07/18/02	<LOD	42	189.4	34.9	<LOD	30.6	117.8	53.5	<LOD	54	<LOD	20.7	<LOD	42	<LOD	31.05	812	130	<LOD	195	<LOD
320	A2-14	8	07/18/02	<LOD	39.6	146.2	29.1	55	21.5	140.7	53.1	<LOD	46.8	<LOD	16.95	<LOD	32.25	<LOD	25.65	862.4	120	<LOD	180	<LOD
277	A2-15	3	07/18/02	<LOD	37.5	182.9	29.4	46.2	19.2	136.6	48.6	<LOD	43.5	<LOD	13.8	<LOD	34.35	<LOD	2					

Appendix C: XRF Data for the Manufacturing Area

(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Ni Error	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs	Cs Error	Te	Te Error	Sb	Sb Error	
266	A2-1	7	07/18/02	285	<LOD	495	16588.8	1200	<LOD	840	<LOD	735	<LOD	1260	<LOD	315	<LOD	510	<LOD	270	<LOD	270	<LOD	270	<LOD
271	A2-1	8	07/18/02	255	<LOD	420	9139.2	920	<LOD	675	<LOD	765	<LOD	600	<LOD	138.45	<LOD	345	<LOD	150	<LOD	109.2	<LOD	26.1	
273	A2-2	3	07/18/02	150	<LOD	330	10496	710	<LOD	510	<LOD	495	<LOD	885	<LOD	17.1	<LOD	390	<LOD	72.45	<LOD	129.3	<LOD	38.85	
276	A2-2	4	07/18/02	285	<LOD	555	19699.2	1400	<LOD	885	<LOD	840	<LOD	630	<LOD	15.15	421.2	270	<LOD	180	<LOD	142.65	<LOD	45.6	
348	A2-3	2.5	07/18/02	285	<LOD	510	15897.6	1200	<LOD	780	<LOD	705	<LOD	765	<LOD	110.4	<LOD	315	<LOD	126.3	<LOD	96.9	<LOD	31.2	
351	A2-3	4	07/18/02	240	<LOD	450	17996.8	1200	<LOD	660	<LOD	645	<LOD	585	<LOD	180	<LOD	270	<LOD	180	<LOD	26.25	<LOD	26.85	
352	A2-4	5.5	07/18/02	345	<LOD	555	16192	1300	<LOD	825	<LOD	825	<LOD	525	<LOD	300	<LOD	405	<LOD	40.8	<LOD	135.75	<LOD	35.4	
355	A2-4	8	07/18/02	285	<LOD	405	9036.8	849.6	<LOD	615	<LOD	690	<LOD	1170	<LOD	18.6	<LOD	495	<LOD	270	<LOD	45.45	<LOD	150	
357	A2-5	7	07/18/02	330	<LOD	555	16000	1300	<LOD	870	<LOD	750	<LOD	825	<LOD	225	<LOD	480	<LOD	285	<LOD	180	<LOD	128.85	
360	A2-5	8	07/18/02	270	<LOD	480	12000	1000	1100	570	<LOD	675	<LOD	495	<LOD	133.2	<LOD	330	<LOD	270	<LOD	105.6	<LOD	37.6	
285	A2-6	3	07/18/02	270	<LOD	435	12396.8	989.6	<LOD	750	<LOD	660	<LOD	1035	<LOD	225	<LOD	375	<LOD	123.15	<LOD	120.3	<LOD	125.85	
288	A2-6	4	07/18/02	210	<LOD	420	12000	960	<LOD	690	<LOD	735	<LOD	420	<LOD	240	<LOD	360	<LOD	195	<LOD	20.7	<LOD	138.6	
289	A2-7	3	07/18/02	285	<LOD	555	17792	1300	<LOD	900	1149.6	640	<LOD	870	<LOD	18	<LOD	465	<LOD	165	<LOD	22.35	<LOD	30.3	
292	A2-7	4	07/18/02	300	<LOD	510	13388.8	1100	<LOD	825	<LOD	735	<LOD	750	<LOD	210	<LOD	315	<LOD	210	<LOD	78.3	<LOD	54.45	
313	A2-8	7	07/18/02	240	371.4	230	5120	590	<LOD	540	<LOD	585	<LOD	795	<LOD	240	<LOD	390	<LOD	180	<LOD	22.8	<LOD	30.9	
316	A2-8	8	07/18/02	300	<LOD	465	9644.8	940	<LOD	645	<LOD	645	<LOD	1035	<LOD	17.55	<LOD	345	<LOD	165	<LOD	22.05	<LOD	44.85	
301	A2-9	2	07/18/02	220	<LOD	480	13798.4	1100	<LOD	750	<LOD	675	<LOD	495	<LOD	91.2	321.4	200	<LOD	129.15	<LOD	127.2	<LOD	108.15	
306	A2-9	4	07/18/02	285	<LOD	555	18790.4	1400	<LOD	945	1149.6	660	<LOD	765	<LOD	285	665.6	400	<LOD	300	<LOD	180	<LOD	42.45	
303	A2-9-DUP	2	07/18/02	300	<LOD	480	11200	1000	<LOD	750	<LOD	720	<LOD	765	<LOD	15.15	<LOD	390	<LOD	180	<LOD	210	<LOD	42.3	
308	A2-9-DUP	4	07/18/02	285	<LOD	570	19200	1400	2308.8	750	<LOD	1050	<LOD	990	<LOD	225	<LOD	345	<LOD	375	<LOD	165	<LOD	180	
297	A2-10	3	07/18/02	285	<LOD	555	22592	1400	1069.6	630	<LOD	810	<LOD	915	<LOD	165	<LOD	405	<LOD	240	<LOD	21.9	<LOD	195	
300	A2-10	4	07/18/02	315	<LOD	525	14592	1300	<LOD	900	<LOD	840	<LOD	645	<LOD	180	<LOD	315	<LOD	285	<LOD	143.25	<LOD	37.05	
293	A2-11	3	07/18/02	300	<LOD	525	16000	1200	<LOD	825	<LOD	840	<LOD	600	<LOD	138.75	<LOD	405	<LOD	195	<LOD	112.65	<LOD	36.15	
296	A2-11	4	07/18/02	255	<LOD	510	19200	1300	<LOD	870	<LOD	750	<LOD	1005	<LOD	14.7	<LOD	360	<LOD	63.15	<LOD	165	<LOD	32.55	
369	A2-12	2	07/18/02	255	<LOD	450	15398.4	1100	<LOD	795	<LOD	690	<LOD	840	<LOD	19.65	<LOD	630	<LOD	107.55	<LOD	46.5	<LOD	165	
372	A2-12	4	07/18/02	345	<LOD	615	20198.4	1500	<LOD	1065	<LOD	1035	<LOD	1020	<LOD	300	<LOD	525	<LOD	141.15	<LOD	134.7	<LOD	141.6	
365	A2-13	2	07/18/02	405	<LOD	570	11897.6	1200	<LOD	960	<LOD	1050	<LOD	1454.4	<LOD	270	<LOD	675	<LOD	480	<LOD	61.95	<LOD	210	
368	A2-13	4	07/18/02	255	<LOD	480	15692.8	1200	<LOD	855	<LOD	825	<LOD	1020	<LOD	165	<LOD	270	<LOD	150	<LOD	38.1	<LOD	32.85	
317	A2-14	6.5	07/18/02	240	<LOD	360	8147.2	760	<LOD	570	<LOD	615	<LOD	735	<LOD	180	572	380	<LOD	255	<LOD	23.25	<LOD	150	
320	A2-14	8	07/18/02	210	<LOD	360	8928	740	<LOD	540	<LOD	585	<LOD	795	<LOD	210	<LOD	360	<LOD	150	<LOD	29.7	<LOD	165	
277	A2-15	3	07/18/02	210	<LOD	405	13196.8	880	<LOD	615	<LOD	585	<LOD	750	<LOD	14.55	<LOD	360	<LOD	165	<LOD	165	<LOD	35.85	
280	A2-15	4	07/18/02	270	<LOD	525	17088	1300	<LOD	870	<LOD	825	<LOD	720	<LOD	140.85	<LOD	420	<LOD	117.75	<LOD	114.15	<LOD	32.7	
309	A2-16	3	07/18/02	270	<LOD	405	10694.4	840	1748.8	530	<LOD	675	<LOD	1215	<LOD	19.2	<LOD	435	<LOD	35.7	<LOD	22.95	<LOD	210	
312	A2-16	4	07/18/02	270	<LOD	450	18291.2	1100	<LOD	780	<LOD	675	<LOD	840	<LOD	146.4	<LOD	360	<LOD	84	<LOD	17.85	<LOD	34.65	
361	A2-17	2	07/18/02	360	<LOD	600	16793.6	1400	<LOD	885	<LOD	885	<LOD	705	<LOD	165	<LOD	465	<LOD	240	<LOD	135.3	<LOD	29.4	
364	A2-17	4	07/18/02	315	<LOD	570	15795.2	1300	1129.6	680	2108.8	820	<LOD	840	<LOD	285	<LOD	450	<LOD	300	<LOD	54.75	<LOD	195	
321	A2-18	6	07/18/02	285	<LOD	465	12096	1000	<LOD	690	<LOD	705	<LOD	960	<LOD	17.7	<LOD	480	<LOD	210	<LOD	41.4	<LOD	40.35	
324	A2-18	7	07/18/02	300	<LOD	435	10796.8	929.6	<LOD	690	<LOD	660	<LOD	1170	<LOD	180	<LOD	495	<LOD	255	<LOD	195	<LOD	42.9	
327	A2-19	2	07/18/02	180	<LOD	330	8249.6</td																		

<LOD·Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Sn	Sn Error	Cd	Cd Error	Ag	Ag Error	Pd	Pd Error	RES3	RES3 Error	RES0	RES0 Error	RES5	RES5 Error	#31	#31 Error	#32	#32 Error
266	A2-1	7	07/18/02	<LOD	1125	<LOD	75	<LOD	525	<LOD	61.5	NA									
271	A2-1	8	07/18/02	<LOD	585	<LOD	6.6	<LOD	165	<LOD	4.2										
273	A2-2	3	07/18/02	<LOD	690	<LOD	35.7	<LOD	210	<LOD	72.9										
276	A2-2	4	07/18/02	<LOD	630	<LOD	165	<LOD	255	<LOD	80.25										
348	A2-3	2.5	07/18/02	<LOD	540	<LOD	93.15	<LOD	210	<LOD	50.1										
351	A2-3	4	07/18/02	<LOD	510	<LOD	69	<LOD	195	<LOD	63.6										
352	A2-4	5.5	07/18/02	<LOD	645	<LOD	27	<LOD	195	<LOD	21.6										
355	A2-4	8	07/18/02	<LOD	705	<LOD	31.05	<LOD	270	<LOD	48.6										
357	A2-5	7	07/18/02	<LOD	765	<LOD	26.4	<LOD	225	<LOD	53.25										
360	A2-5	8	07/18/02	<LOD	555	<LOD	150	<LOD	195	<LOD	58.2										
285	A2-6	3	07/18/02	<LOD	570	<LOD	165	<LOD	195	<LOD	19.95										
288	A2-6	4	07/18/02	<LOD	660	<LOD	34.35	<LOD	255	<LOD	73.95										
289	A2-7	3	07/18/02	<LOD	705	<LOD	8.4	<LOD	315	<LOD	8.7										
292	A2-7	4	07/18/02	<LOD	825	<LOD	58.2	<LOD	315	<LOD	47.4										
313	A2-8	7	07/18/02	<LOD	720	<LOD	8.25	<LOD	270	<LOD	7.35										
316	A2-8	8	07/18/02	<LOD	660	<LOD	195	<LOD	195	<LOD	91.8										
301	A2-9	2	07/18/02	<LOD	540	<LOD	107.85	<LOD	180	<LOD	20.7										
306	A2-9	4	07/18/02	<LOD	690	<LOD	37.05	<LOD	255	<LOD	30.15										
303	A2-9-DUP	2	07/18/02	<LOD	585	<LOD	165	<LOD	255	<LOD	67.5										
308	A2-9-DUP	4	07/18/02	<LOD	675	<LOD	240	<LOD	285	<LOD	150										
297	A2-10	3	07/18/02	<LOD	615	<LOD	8.4	<LOD	225	<LOD	74.55										
300	A2-10	4	07/18/02	<LOD	690	<LOD	28.65	<LOD	225	<LOD	22.95										
293	A2-11	3	07/18/02	<LOD	555	<LOD	107.55	<LOD	165	<LOD	62.85										
296	A2-11	4	07/18/02	<LOD	540	<LOD	95.4	<LOD	180	<LOD	5.7										
369	A2-12	2	07/18/02	<LOD	795	<LOD	87.45	<LOD	225	<LOD	26.7										
372	A2-12	4	07/18/02	<LOD	675	<LOD	114.15	<LOD	300	<LOD	8.7										
365	A2-13	2	07/18/02	<LOD	855	<LOD	375	<LOD	315	<LOD	270										
368	A2-13	4	07/18/02	<LOD	690	<LOD	26.85	<LOD	240	<LOD	73.65										
317	A2-14	6.5	07/18/02	<LOD	660	<LOD	7.8	<LOD	210	<LOD	28.35										
320	A2-14	8	07/18/02	<LOD	555	<LOD	81.9	<LOD	180	<LOD	63										
277	A2-15	3	07/18/02	<LOD	630	<LOD	127.8	<LOD	240	<LOD	62.25										
280	A2-15	4	07/18/02	<LOD	645	<LOD	56.1	<LOD	210	<LOD	63.9										
309	A2-16	3	07/18/02	<LOD	885	<LOD	165	<LOD	270	<LOD	8.55										
312	A2-16	4	07/18/02	<LOD	630	<LOD	138.45	<LOD	270	<LOD	8.25										
361	A2-17	2	07/18/02	<LOD	660	<LOD	9.75	<LOD	330	<LOD	95.85										
364	A2-17	4	07/18/02	<LOD	765	<LOD	240	<LOD	315	<LOD	77.4										
321	A2-18	6	07/18/02	<LOD	705	<LOD	120.15	<LOD	300	<LOD	180										
324	A2-18	7	07/18/02	<LOD	675	<LOD	36.45	<LOD	300	<LOD	30.15										
327	A2-19	2	07/18/02	<LOD	540	<LOD	6.9	<LOD	165	<LOD	52.05										
328	A2-19	4	07/18/02	<LOD	435	<LOD	79.5	<LOD	150	<LOD	34.95										
373	A2-20	2	07/18/02	<LOD	585	<LOD	6.75	<LOD	270	<LOD	7.05										
376	A2-20	4	07/18/02	<LOD	810	<LOD	40.8	<LOD	345	<LOD	33.6										
281	A2-21	3	07/18/02	<LOD	870	<LOD	165	<LOD	390	<LOD	48.3										
284	A2-21	4	07/18/02	<LOD	720	<LOD	32.1	<LOD	345	<LOD	88.5										
339	A2-22	2	07/18/02	<LOD	4200	<LOD	34.95	<LOD	825	<LOD	34.35										
343	A2-22	4	07/18/02	<LOD	720	<LOD	123	<LOD	255	<LOD	134.7										
335	A2-23	3	07/18/02	<LOD	585	<LOD	6.6	<LOD	210	<LOD	5.55										
336	A2-23	4	07/18/02	<LOD	555	<LOD	100.35	<LOD	19												

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error
429	A3-1	2.5	07/19/02	<LOD	44.1	230.2	38.4	50.6	23.1	125.6	55.5	<LOD	45.9	<LOD	22.35	<LOD	37.65	<LOD	30.9	417.6	100	<LOD	180	<LOD	240
432	A3-1	4	07/19/02	<LOD	45.9	220.2	40.2	80.7	27.8	134.7	60.7	<LOD	45.9	<LOD	23.85	<LOD	35.55	<LOD	28.5	1229.6	170	<LOD	225	<LOD	330
416	A3-2	2	07/18/02	<LOD	44.4	170.6	34.3	<LOD	30.15	67.5	44.6	<LOD	46.5	<LOD	20.55	<LOD	35.7	<LOD	27.3	319.4	100	<LOD	240	1880	300
419	A3-2	4	07/18/02	<LOD	43.95	157.3	32.6	57.1	23.5	81.4	46.7	<LOD	38.7	<LOD	19.35	<LOD	32.4	<LOD	21.15	<LOD	92.4	<LOD	165	<LOD	270
425	A3-3	2.5	07/19/02	<LOD	41.7	183	34.2	40.9	21.6	163.4	60.7	<LOD	46.95	<LOD	22.2	<LOD	35.1	<LOD	28.95	843.2	130	<LOD	165	<LOD	240
428	A3-3	4.5	07/19/02	<LOD	46.5	203.8	38	72.6	26.3	72	47.1	<LOD	45	<LOD	19.5	<LOD	39.3	<LOD	24.3	253.6	92	<LOD	195	642.8	220
412	A3-4	2	07/18/02	<LOD	47.1	216.6	41.6	40.7	24.6	167.4	69.5	<LOD	69.3	<LOD	29.7	<LOD	54.3	<LOD	34.05	2929.6	290	556.4	240	672.8	290
415	A3-4	4	07/18/02	<LOD	48.9	185.8	39.1	66.2	27.4	121.8	60.9	<LOD	60.3	<LOD	15.75	<LOD	52.95	<LOD	35.85	3878.4	350	1020	280	616.8	270
433	A3-5	2.5	07/19/02	<LOD	48.75	281.6	47.9	66.6	28.1	158.6	68.9	<LOD	50.25	<LOD	21.3	<LOD	43.95	<LOD	29.25	212.4	96	<LOD	210	475.6	230
436	A3-5	4	07/19/02	<LOD	56.7	197.8	43.2	<LOD	39	174.5	75.8	<LOD	63.6	<LOD	27.6	<LOD	50.25	<LOD	31.2	344.2	120	<LOD	255	1249.6	310
408	A3-6	2	07/18/02	<LOD	55.2	165.9	41.8	62.8	30.3	98.4	62.6	<LOD	60.15	<LOD	27.3	<LOD	43.95	<LOD	30.75	354.2	120	<LOD	225	<LOD	360
411	A3-6	4	07/18/02	<LOD	43.05	204.8	37.3	59	24.5	122.5	56.1	<LOD	43.65	<LOD	17.1	<LOD	35.25	<LOD	30.75	<LOD	113.1	<LOD	195	<LOD	285
598	A3-7	10	07/20/02	<LOD	48.45	187	37.8	48.5	24.5	141.9	62.6	<LOD	54.3	<LOD	23.55	<LOD	45.45	<LOD	30.9	219.2	94.9	<LOD	225	397.4	230
601	A3-7	11	07/20/02	<LOD	46.5	170.2	36.2	74.4	27.2	95.6	53.5	<LOD	48.3	<LOD	22.95	<LOD	37.95	<LOD	25.35	<LOD	108.9	<LOD	180	479.2	210
560	A3-8	5	07/20/02	<LOD	40.05	203.3	35.8	66.7	24.3	135.3	56.1	<LOD	48.3	<LOD	19.5	<LOD	35.85	<LOD	27	490.4	110	<LOD	195	453.6	210
563	A3-8	6	07/20/02	<LOD	45.75	189.9	36.6	71.7	26	132.1	58.3	<LOD	42.6	<LOD	22.8	<LOD	35.1	<LOD	28.05	518	110	<LOD	195	499.2	210
564	A3-9	2	07/20/02	<LOD	55.05	227.8	47.1	44.8	27.5	101.6	62.4	<LOD	41.1	<LOD	29.25	<LOD	38.1	<LOD	29.1	466.4	130	<LOD	255	586	280
566	A3-9	3	07/20/02	<LOD	41.85	174.5	35.9	<LOD	33.45	151.7	63.2	<LOD	48.75	<LOD	20.55	<LOD	40.65	<LOD	31.8	817.6	140	<LOD	210	<LOD	300
400	A3-10	2.5	07/18/02	<LOD	35.4	186.7	29.7	53.8	19.7	115.6	45.4	<LOD	33	<LOD	18	<LOD	27.75	<LOD	20.4	353.4	80.2	<LOD	144.9	<LOD	210
403	A3-10	4	07/18/02	<LOD	45	154.5	33.7	44.3	23.2	96.4	52	<LOD	55.2	<LOD	29.25	<LOD	38.55	<LOD	30.6	1069.6	150	<LOD	210	<LOD	270
556	A3-11	5	07/20/02	63.2	32.9	156	32.6	49.2	22.8	133.6	56.7	<LOD	43.2	<LOD	20.85	<LOD	39.3	<LOD	24.9	592	120	<LOD	195	<LOD	300
557	A3-11	6	07/20/02	<LOD	45.15	197.4	40.3	52.2	25.8	128.1	62.2	<LOD	43.65	<LOD	17.1	<LOD	39.9	<LOD	25.65	919.2	170	<LOD	300	3209.6	400
577	A3-12	2.5	07/20/02	<LOD	42.45	244.8	41.3	36.4	22.3	119.1	56.4	<LOD	39.3	<LOD	21.3	<LOD	35.25	<LOD	25.05	614	120	<LOD	210	<LOD	300
578	A3-12	3.5	07/20/02	<LOD	45	233.4	42.4	40.9	24	134	62	<LOD	60.9	<LOD	17.1	<LOD	43.05	<LOD	26.4	764.8	140	<LOD	240	657.2	250
396	A3-13	6	07/18/02	<LOD	34.35	146.2	27.1	59.4	20.4	135.8	48.7	<LOD	33.6	<LOD	18.6	<LOD	28.35	<LOD	23.4	351.6	80.8	<LOD	148.65	<LOD	210
399	A3-13	8	07/18/02	<LOD	48.9	223.8	38.5	57.3	24	108.4	53	<LOD	41.4	<LOD	20.55	<LOD	35.25	<LOD	26.1	520.8	110	<LOD	195	<LOD	270
404	A3-14	2	07/18/02	<LOD	44.4	275.2	40.5	63.8	23.9	126.6	54.2	<LOD	46.5	<LOD	25.35	<LOD	38.55	<LOD	32.7	276.2	90.3	<LOD	195	544	220
407	A3-14	4	07/18/02	<LOD	46.5	199.1	41.5	59	27.7	138.8	66.4	<LOD	71.7	<LOD	22.8	<LOD	48.75	<LOD	33	186.5	94.9	<LOD	210	620.4	250
593	A3-15	2	07/20/02	<LOD	47.4	169.4	40.1	51.4	27.4	108.7	61.9	<LOD	74.7	<LOD	31.8	<LOD	48.15	<LOD	26.85	866.4	160	<LOD	240	513.6	260
594	A3-15	5	07/20/02	<LOD	45.6	233.6	40	<LOD	30.9	144.9	60.6	<LOD	36.6	<LOD	15.75	<LOD	34.65	<							

Appendix C: XRF Data for the Manufacturing Area
(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs	Cs Error	Te	Te Error	Sb	Sb Error	Sn
429	A3-1	2.5	07/19/02	<LOD	480	14796.8	1100	<LOD	780	<LOD	780	<LOD	735	<LOD	405	<LOD	405	<LOD	330	<LOD	49.5	<LOD	165	<LOD
432	A3-1	4	07/19/02	<LOD	540	17292.8	1300	<LOD	840	<LOD	795	<LOD	915	<LOD	285	<LOD	525	<LOD	54	<LOD	165	<LOD	165	<LOD
416	A3-2	2	07/18/02	<LOD	570	17792	1300	1739.2	680	<LOD	870	<LOD	1260	<LOD	17.55	<LOD	360	<LOD	165	<LOD	22.2	<LOD	30	<LOD
419	A3-2	4	07/18/02	<LOD	405	8838.4	810	2520	610	<LOD	840	<LOD	1005	<LOD	195	<LOD	435	<LOD	195	<LOD	21.45	<LOD	144.9	<LOD
425	A3-3	2.5	07/19/02	<LOD	450	15091.2	1100	<LOD	780	<LOD	750	<LOD	915	<LOD	195	<LOD	435	<LOD	101.4	<LOD	150	<LOD	240	<LOD
428	A3-3	4.5	07/19/02	<LOD	420	10598.4	929.6	<LOD	705	<LOD	705	<LOD	1200	<LOD	420	<LOD	510	<LOD	240	<LOD	180	<LOD	67.35	<LOD
412	A3-4	2	07/18/02	<LOD	900	44979.2	2899.2	2939.2	1100	<LOD	1290	<LOD	615	<LOD	35.25	<LOD	240	<LOD	150	<LOD	32.1	<LOD	32.55	<LOD
415	A3-4	4	07/18/02	767.6	460	22195.2	1699.2	<LOD	1110	<LOD	975	<LOD	840	<LOD	255	582	340	<LOD	139.65	<LOD	18.6	<LOD	24.75	<LOD
433	A3-5	2.5	07/19/02	<LOD	405	7756.8	829.6	<LOD	675	<LOD	705	<LOD	1650	<LOD	32.85	<LOD	480	<LOD	116.25	<LOD	315	<LOD	315	<LOD
436	A3-5	4	07/19/02	<LOD	600	17088	1500	<LOD	990	<LOD	945	<LOD	720	<LOD	15.15	<LOD	225	<LOD	210	<LOD	35.25	<LOD	42.3	<LOD
408	A3-6	2	07/18/02	<LOD	570	12396.8	1200	<LOD	885	<LOD	765	<LOD	990	<LOD	240	<LOD	585	<LOD	55.5	<LOD	54	<LOD	195	<LOD
411	A3-6	4	07/18/02	<LOD	390	10598.4	909.6	<LOD	690	<LOD	660	<LOD	795	<LOD	93.3	456.8	290	<LOD	36.75	<LOD	107.55	<LOD	110.1	<LOD
598	A3-7	10	07/20/02	<LOD	585	19097.6	1400	<LOD	975	<LOD	885	<LOD	930	<LOD	330	<LOD	525	<LOD	270	<LOD	45.9	<LOD	165	<LOD
601	A3-7	11	07/20/02	<LOD	375	8064	800	773.2	490	<LOD	660	NA	525	<LOD	18.75	<LOD	585	<LOD	180	<LOD	23.7	<LOD	31.65	<LOD
560	A3-8	5	07/20/02	<LOD	525	17292.8	1200	<LOD	870	<LOD	705	<LOD	765	<LOD	165	<LOD	255	<LOD	144.75	<LOD	133.8	<LOD	29.1	<LOD
563	A3-8	6	07/20/02	<LOD	435	12697.6	1000	<LOD	750	<LOD	675	NA	765	<LOD	255	<LOD	300	<LOD	240	<LOD	165	<LOD	127.2	<LOD
564	A3-9	2	07/20/02	<LOD	510	11097.6	1100	<LOD	840	<LOD	810	<LOD	1454.4	<LOD	23.55	<LOD	720	<LOD	315	<LOD	62.85	<LOD	48.6	<LOD
566	A3-9	3	07/20/02	<LOD	555	20800	1500	<LOD	960	<LOD	765	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
400	A3-10	2.5	07/18/02	<LOD	405	15398.4	969.6	<LOD	690	<LOD	600	<LOD	600	<LOD	15.45	<LOD	420	<LOD	255	<LOD	21.75	<LOD	36.6	<LOD
403	A3-10	4	07/18/02	<LOD	465	13798.4	1100	<LOD	795	<LOD	750	<LOD	555	<LOD	136.5	<LOD	375	<LOD	195	<LOD	150	<LOD	165	<LOD
556	A3-11	5	07/20/02	<LOD	525	17689.6	1300	1480	640	<LOD	795	<LOD	795	<LOD	240	596.4	390	<LOD	56.85	<LOD	195	<LOD	44.1	<LOD
557	A3-11	6	07/20/02	<LOD	585	15692.8	1300	1089.6	670	<LOD	840	NA	765	<LOD	180	<LOD	405	<LOD	150	<LOD	43.05	<LOD	42.45	<LOD
577	A3-12	2.5	07/20/02	<LOD	465	14195.2	1100	<LOD	780	<LOD	675	<LOD	1020	<LOD	255	<LOD	660	<LOD	360	<LOD	195	<LOD	48	<LOD
578	A3-12	3.5	07/20/02	<LOD	585	17190.4	1400	<LOD	945	<LOD	765	NA	900	<LOD	195	<LOD	510	<LOD	165	<LOD	150	<LOD	32.1	<LOD
396	A3-13	6	07/18/02	<LOD	435	16793.6	1000	<LOD	705	<LOD	615	<LOD	1170	<LOD	50.1	<LOD	390	<LOD	150	<LOD	150	<LOD	45.45	<LOD
399	A3-13	8	07/18/02	<LOD	495	16588.8	1200	<LOD	840	<LOD	705	<LOD	765	<LOD	146.55	483.2	310	<LOD	150	<LOD	165	<LOD	210	<LOD
404	A3-14	2	07/18/02	<LOD	510	17600	1200	<LOD	795	<LOD	765	<LOD	705	<LOD	270	<LOD	390	<LOD	345	<LOD	26.7	<LOD	29.85	<LOD
407	A3-14	4	07/18/02	<LOD	480	10099.2	1000	<LOD	765	<LOD	780	<LOD	705	<LOD	195	<LOD	360	<LOD	27	<LOD	104.55	<LOD	25.5	<LOD
593	A3-15	2	07/20/02	<LOD	585	16691.2	1400	<LOD	1035	<LOD	900	<LOD	855	<LOD	300	<LOD	270	<LOD	240	<LOD	24	<LOD	30.6	<LOD
594	A3-15	5	07/20/02	<LOD	540	16499.2	1300	<LOD	855	<LOD	720	<LOD	1065	<LOD	390	<LOD	330	<LOD	225	<LOD	165	<LOD	47.25	<LOD
597	A3-15	6	07/20/02	<LOD	570	18688	1400	<LOD	1005	<LOD	795	NA	855	<LOD	195	<LOD	420	<LOD	44.85	<LOD	58.2	<LOD	65.7	<LOD
589	A3-16	6	07/20/02	<LOD	825	14796.8	1800	<LOD	1304.4	<LOD	1155	<LOD	630	<LOD	180	&								

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Sn Error	Cd	Cd Error	Ag	Ag Error	Pd	Pd Error
429	A3-1	2.5	07/19/02	735<LOD	33.45	<LOD	315<LOD	27.45		
432	A3-1	4	07/19/02	735<LOD	32.7	<LOD	195<LOD	25.95		
416	A3-2	2	07/18/02	720<LOD	9.3	<LOD	195<LOD	90.6		
419	A3-2	4	07/18/02	645<LOD	117.3	<LOD	165<LOD	5.55		
425	A3-3	2.5	07/19/02	765<LOD	11.55	<LOD	210<LOD	118.05		
428	A3-3	4.5	07/19/02	870<LOD	150	<LOD	270<LOD	48.6		
412	A3-4	2	07/18/02	615<LOD	90.75	<LOD	255<LOD	60.3		
415	A3-4	4	07/18/02	615<LOD	7.2	<LOD	210<LOD	5.85		
433	A3-5	2.5	07/19/02	1320<LOD	112.8	<LOD	435<LOD	180		
436	A3-5	4	07/19/02	600<LOD	165	<LOD	165<LOD	70.5		
408	A3-6	2	07/18/02	810<LOD	39.15	<LOD	225<LOD	31.35		
411	A3-6	4	07/18/02	555<LOD	21.6	<LOD	195<LOD	47.25		
598	A3-7	10	07/20/02	735<LOD	134.7	<LOD	360<LOD	26.55		
601	A3-7	11	07/20/02	900<LOD	10.95	<LOD	285<LOD	7.35		
560	A3-8	5	07/20/02	660<LOD	9.6	<LOD	240<LOD	102.15		
563	A3-8	6	07/20/02	600<LOD	102.6	<LOD	180<LOD	24.6		
564	A3-9	2	07/20/02	960<LOD	44.7	<LOD	375<LOD	36.45		
566	A3-9	3	07/20/02	NA	NA		NA			
400	A3-10	2.5	07/18/02	675<LOD	146.25	<LOD	195<LOD	6.45		
403	A3-10	4	07/18/02	585<LOD	93.15	<LOD	180<LOD	18		
556	A3-11	5	07/20/02	675<LOD	39.6	<LOD	285<LOD	81.3		
557	A3-11	6	07/20/02	720<LOD	127.65	<LOD	300<LOD	25.35		
577	A3-12	2.5	07/20/02	870<LOD	165	<LOD	240<LOD	7.65		
578	A3-12	3.5	07/20/02	675<LOD	7.95	<LOD	270<LOD	7.5		
396	A3-13	6	07/18/02	705<LOD	131.7	<LOD	315<LOD	26.25		
399	A3-13	8	07/18/02	615<LOD	7.95	<LOD	285<LOD	7.65		
404	A3-14	2	07/18/02	855<LOD	10.05	<LOD	180<LOD	4.8		
407	A3-14	4	07/18/02	630<LOD	7.2	<LOD	150<LOD	4.2		
593	A3-15	2	07/20/02	750<LOD	8.4	<LOD	165<LOD	4.2		
594	A3-15	5	07/20/02	750<LOD	137.55	<LOD	300<LOD	91.2		
597	A3-15	6	07/20/02	750<LOD	43.2	<LOD	240<LOD	34.8		
589	A3-16	6	07/20/02	840<LOD	36.45	<LOD	405<LOD	30.3		
590	A3-16	7	07/20/02	570<LOD	139.95	<LOD	225<LOD	17.25		
550	A3-17	5.5	07/20/02	585<LOD	6.45	<LOD	240<LOD	6.3		
552	A3-17	6.5	07/20/02	675<LOD	7.95	<LOD	240<LOD	6.45		
445	A3-18	3	07/19/02	660<LOD	112.5	<LOD	240<LOD	6.9		
448	A3-18	4	07/19/02	555<LOD	6.75	<LOD	195<LOD	5.25		
583	A3-19	5	07/20/02	705<LOD	31.65	<LOD	330<LOD	87.15		
586	A3-19	6	07/20/02	810<LOD	39.3	<LOD	300<LOD	108.75		
441	A3-20	2	07/19/02	675<LOD	102.3	<LOD	210<LOD	66.9		
444	A3-20	4	07/19/02	525<LOD	6.3	<LOD	132<LOD	56.7		
387	A3-21	3	07/18/02	825<LOD	36	<LOD	330<LOD	29.4		
390	A3-21	5	07/18/02	600<LOD	136.8	<LOD	225<LOD	64.65		
567	A3-22	6	07/20/02	735<LOD	42.9	<LOD	255<LOD	118.5		
569	A3-22	7	07/20/02	615<LOD	195	<LOD	240<LOD	75.6		
437	A3-23	3	07/19/02	735<LOD	133.5	<LOD	300<LOD	88.65		
440	A3-23	4	07/19/02	675<LOD	9.3	<LOD	240<LOD	94.5		
573	A3-24	2	07/20/02	720<LOD	32.4	<LOD	225<LOD	111.9		
574	A3-24	3	07/20/02	630<LOD	270	<LOD	240<LOD	9.45		
378	A3-25	2	07/18/02	615<LOD	165	<LOD	210<LOD	105.15		
381	A3-25	4	07/18/02	735<LOD	28.95	<LOD	180<LOD	22.8		

<LOD.Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error
507	A4-1	6	7/19/02	<LOD	45	222	38.2	94.5	27.6	113	53.8	<LOD	52.65	<LOD	22.2	<LOD	39	<LOD	30	1389.6	170	<LOD	225	1060	240
510	A4-1	8	7/19/02	<LOD	36.6	173.4	33.3	57.1	23.2	70	43.9	<LOD	47.7	<LOD	20.1	<LOD	36	<LOD	28.2	1080	150	<LOD	195	<LOD	255
482	A4-2	2.5	7/19/02	<LOD	39.3	307	38.3	64.2	21.3	155.5	52.4	<LOD	37.35	<LOD	19.95	<LOD	30	<LOD	19.2	295.2	78.9	<LOD	150	<LOD	225
485	A4-2	4	7/19/02	<LOD	36.9	192.7	35.7	50.6	23	136.9	57.4	<LOD	34.05	<LOD	16.05	<LOD	32.7	<LOD	33.15	5139.2	370	<LOD	300	<LOD	255
503	A4-3	2	7/19/02	<LOD	42.45	168.7	34.7	48	23.5	141.3	60	<LOD	51.6	<LOD	19.05	<LOD	41.4	<LOD	34.65	2320	230	<LOD	240	<LOD	285
506	A4-3	4	7/19/02	<LOD	47.1	235.2	43.3	65.6	27.5	140.5	64.7	<LOD	61.8	<LOD	21.45	<LOD	46.05	<LOD	37.5	<LOD	165	<LOD	285	2969.6	380
512	A4-4	4	7/20/02	<LOD	42.75	171.5	33.9	46.8	22.6	99.1	50.6	<LOD	54.15	<LOD	17.55	<LOD	39.15	<LOD	25.2	131.6	74.8	<LOD	165	<LOD	285
515	A4-4	5	7/20/02	<LOD	44.1	143.6	32.6	77.4	26.5	137.2	59.2	<LOD	44.7	<LOD	21.45	<LOD	32.1	<LOD	27	<LOD	106.8	<LOD	180	318.4	210
490	A4-6	2	7/19/02	<LOD	49.35	233.2	39.8	60	24.7	140.8	59.5	<LOD	50.1	<LOD	23.1	<LOD	38.4	<LOD	26.85	383.6	99.2	<LOD	165	<LOD	240
493	A4-6	4	7/19/02	<LOD	48.45	155.9	33.8	<LOD	29.1	134.4	59.1	<LOD	48.6	<LOD	21	<LOD	37.5	<LOD	24.9	811.6	140	<LOD	225	420.8	220
520	A4-7	3	7/20/02	<LOD	54.9	293.4	50.1	64.7	28.5	104.9	60	<LOD	53.25	<LOD	31.2	<LOD	45.3	<LOD	31.8	225	100	<LOD	225	1080	280
523	A4-7	4	7/20/02	<LOD	39.45	186.9	35.7	41	22.3	73.7	46.3	<LOD	44.25	<LOD	18.6	<LOD	32.85	<LOD	26.1	443.6	110	<LOD	195	<LOD	285
524	A4-8	5	7/20/02	<LOD	49.35	217.8	39.5	69.6	26.3	92.9	52	<LOD	53.25	<LOD	20.85	<LOD	37.65	<LOD	28.65	<LOD	129.9	<LOD	225	1469.6	270
527	A4-8	6	7/20/02	<LOD	38.55	204.8	35.6	68	24.1	86	46.9	<LOD	42.9	<LOD	20.55	<LOD	36.6	<LOD	28.95	336.2	93.3	<LOD	195	396	190
478	A4-9	2	7/19/02	<LOD	45.75	194.5	37.5	54.3	24.8	123.5	58.3	<LOD	44.7	<LOD	22.65	<LOD	38.55	<LOD	34.2	356.8	100	<LOD	180	<LOD	300
481	A4-9	4	7/19/02	<LOD	46.35	252.6	41	76.9	26.4	94.7	51.2	<LOD	55.05	<LOD	22.05	<LOD	40.95	<LOD	33.75	148.9	78.9	<LOD	180	<LOD	285
516	A4-10	7	7/20/02	<LOD	54.3	230.4	44.7	73.6	29.4	103.5	59.6	<LOD	53.55	<LOD	28.8	<LOD	42.75	<LOD	34.05	401.6	120	<LOD	225	570.8	250
519	A4-10	8	7/20/02	<LOD	53.1	234	46.2	66.7	29.4	131.3	66.9	<LOD	65.1	<LOD	23.25	<LOD	46.65	<LOD	30.3	<LOD	180	<LOD	360	6598.4	620
486	A4-11	2	7/19/02	<LOD	45.15	267	46.9	65.7	28.1	149.7	67.7	<LOD	59.85	<LOD	29.55	<LOD	45.3	<LOD	31.35	515.2	130	<LOD	210	<LOD	330
489	A4-11	4	7/19/02	<LOD	53.25	249.4	46.1	92.4	31.3	106.5	59.9	<LOD	41.55	<LOD	23.1	<LOD	34.65	<LOD	32.1	<LOD	134.55	<LOD	270	2649.6	370
495	A4-12	2	7/19/02	<LOD	40.05	245.4	37.1	63.7	22.8	128.1	52.2	<LOD	39.75	<LOD	19.05	<LOD	33.75	<LOD	21.75	504.4	99	<LOD	150	<LOD	210
498	A4-12	4	7/19/02	<LOD	49.05	194.7	39.3	43	24.4	120.4	59.8	<LOD	43.5	<LOD	18.6	<LOD	38.25	<LOD	25.65	351.6	110	<LOD	210	<LOD	300
528	A4-13	2.5	7/20/02	<LOD	59.85	154.8	42.5	68.1	32.5	187.2	85	<LOD	61.35	<LOD	23.25	<LOD	50.1	<LOD	35.7	598	150	<LOD	270	777.6	310
532	A4-13	3.5	7/20/02	<LOD	47.55	203.4	42.6	66	28.9	148.1	69.3	<LOD	54.45	<LOD	25.2	<LOD	43.35	<LOD	40.5	211.4	100	<LOD	225	627.2	260
499	A4-14	2	7/19/02	<LOD	48.3	214	39.7	<LOD	33.9	160.4	65.4	<LOD	40.65	<LOD	21.15	<LOD	41.4	<LOD	34.95	758.8	140	<LOD	210	<LOD	315
502	A4-14	4	7/19/02	<LOD	49.05	213.4	40.9	55.7	25.9	143	64	<LOD	46.95	<LOD	21.3	<LOD	40.95	<LOD	33.75	1880	220	<LOD	255	<LOD	300
473	A4-15	2	7/19/02	<LOD	54.45	192	39.9	50.7	25.9	178.2	71.7	<LOD	52.65	<LOD	22.05	<LOD	43.65	<LOD	34.95	1480	200	<LOD	255	<LOD	315
476	A4-15	4	7/19/02	49.9	32.5	221.8	37.4	71.4	24.9	119.9	53.8	<LOD	51.45	<LOD	18.6	<LOD	36.9	<LOD	24.75	<LOD	99.9	<LOD	150	<LOD	225
469	A4-16	3	7/19/02	<LOD	44.4	198.3	37.7	65.3	25.8	157.3	63.6	<LOD	40.05	<LOD	19.95	<LOD	34.2	<LOD	30.3	894.4	140	<LOD	225	<LOD	315
472	A4-16	4	7/19/02	<LOD	39.9	214.4	36.2	49.9	22.3	114.1	51.8	<LOD	48.15	<LOD	20.55	<LOD	40.2	<LOD	28.95	1560	170	<LOD	2		

Appendix C: XRF Data for the Manufacturing Area

(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs	Cs Error	Te	Te Error	Sb	Sb Error	Sn	Sn Error
507	A4-1	6	7/19/02	<LOD	405	8748.8	790	<LOD	675	<LOD	720	<LOD	900	<LOD	225	<LOD	141.6	<LOD	180	<LOD	210	<LOD	130.05	<LOD	630
510	A4-1	8	7/19/02	<LOD	360	6886.4	680	1169.6	470	<LOD	600	<LOD	630	<LOD	15.45	<LOD	435	<LOD	285	<LOD	165	<LOD	150	<LOD	645
482	A4-2	2.5	7/19/02	<LOD	270	4579.2	480	<LOD	420	<LOD	510	<LOD	1125	<LOD	315	<LOD	315	<LOD	113.85	<LOD	150	<LOD	165	<LOD	750
485	A4-2	4	7/19/02	<LOD	510	18099.2	1300	<LOD	840	<LOD	795	<LOD	810	<LOD	14.25	<LOD	270	<LOD	150	<LOD	18.6	<LOD	165	<LOD	645
503	A4-3	2	7/19/02	<LOD	525	18188.8	1300	<LOD	855	<LOD	705	<LOD	690	<LOD	18.3	<LOD	405	<LOD	225	<LOD	45	<LOD	43.65	<LOD	705
506	A4-3	4	7/19/02	<LOD	600	20096	1500	<LOD	975	<LOD	900	<LOD	870	<LOD	14.55	440	270	<LOD	134.25	<LOD	99.15	<LOD	37.95	<LOD	585
512	A4-4	4	7/20/02	<LOD	510	16000	1200	<LOD	780	<LOD	660	<LOD	1080	<LOD	210	<LOD	480	<LOD	240	<LOD	24.45	<LOD	39.75	<LOD	780
515	A4-4	5	7/20/02	<LOD	525	17497.6	1300	<LOD	840	<LOD	765	<LOD	840	<LOD	17.4	<LOD	285	<LOD	150	<LOD	42.45	<LOD	150	<LOD	705
490	A4-6	2	7/19/02	<LOD	360	6969.6	710	<LOD	660	<LOD	630	<LOD	1215	<LOD	210	<LOD	660	<LOD	345	<LOD	165	<LOD	52.5	<LOD	840
493	A4-6	4	7/19/02	<LOD	570	16793.6	1300	<LOD	840	<LOD	765	<LOD	630	<LOD	165	<LOD	315	<LOD	180	<LOD	19.35	<LOD	31.2	<LOD	585
520	A4-7	3	7/20/02	<LOD	345	4688	640	<LOD	555	<LOD	630	<LOD	930	<LOD	17.7	<LOD	510	<LOD	165	<LOD	21.9	<LOD	165	<LOD	690
523	A4-7	4	7/20/02	<LOD	525	17190.4	1300	<LOD	840	<LOD	810	<LOD	525	<LOD	18.75	<LOD	555	<LOD	38.4	<LOD	21.45	<LOD	180	<LOD	735
524	A4-8	5	7/20/02	<LOD	390	7238.4	740	<LOD	585	<LOD	600	<LOD	1065	<LOD	20.25	880	510	<LOD	330	<LOD	48.6	<LOD	165	<LOD	750
527	A4-8	6	7/20/02	<LOD	375	9376	800	<LOD	645	<LOD	675	<LOD	750	<LOD	180	<LOD	435	<LOD	150	<LOD	20.55	<LOD	28.05	<LOD	645
478	A4-9	2	7/19/02	<LOD	585	19289.6	1400	<LOD	915	<LOD	810	<LOD	855	<LOD	18.15	<LOD	435	<LOD	34.95	<LOD	42.6	<LOD	42.6	<LOD	675
481	A4-9	4	7/19/02	<LOD	420	12896	1000	<LOD	720	<LOD	735	<LOD	810	<LOD	195	<LOD	585	<LOD	255	<LOD	24.9	<LOD	31.65	<LOD	690
516	A4-10	7	7/20/02	<LOD	555	15692.8	1300	<LOD	915	<LOD	825	<LOD	855	<LOD	360	<LOD	660	<LOD	42.6	<LOD	21	<LOD	36.15	<LOD	675
519	A4-10	8	7/20/02	<LOD	525	9484.8	1000	<LOD	870	1280	740	<LOD	630	<LOD	255	<LOD	420	<LOD	285	<LOD	23.4	<LOD	27.9	<LOD	675
486	A4-11	2	7/19/02	<LOD	555	15488	1300	<LOD	900	<LOD	855	<LOD	570	<LOD	180	<LOD	360	<LOD	148.5	<LOD	146.85	<LOD	41.55	<LOD	645
489	A4-11	4	7/19/02	<LOD	525	11596.8	1100	<LOD	870	<LOD	990	<LOD	975	<LOD	195	<LOD	615	<LOD	225	<LOD	46.5	<LOD	165	<LOD	765
495	A4-12	2	7/19/02	<LOD	360	10598.4	829.6	<LOD	630	<LOD	630	<LOD	705	<LOD	36.3	<LOD	420	<LOD	165	<LOD	165	<LOD	165	<LOD	750
498	A4-12	4	7/19/02	<LOD	600	17894.4	1400	2560	780	<LOD	930	<LOD	705	<LOD	16.05	<LOD	360	<LOD	240	<LOD	22.2	<LOD	34.05	<LOD	675
528	A4-13	2.5	7/20/02	<LOD	690	18598.4	1699.2	<LOD	1140	<LOD	1065	<LOD	750	<LOD	14.85	<LOD	375	<LOD	195	<LOD	111.45	<LOD	115.05	<LOD	555
532	A4-13	3.5	7/20/02	<LOD	510	12198.4	1100	<LOD	855	<LOD	795	<LOD	1005	<LOD	195	<LOD	540	<LOD	120.15	<LOD	165	<LOD	39.75	<LOD	765
499	A4-14	2	7/19/02	<LOD	630	21888	1600	<LOD	1035	<LOD	975	<LOD	930	<LOD	210	<LOD	315	<LOD	255	<LOD	144	<LOD	37.05	<LOD	645
502	A4-14	4	7/19/02	<LOD	480	12000	1100	<LOD	825	<LOD	870	<LOD	720	<LOD	240	<LOD	630	<LOD	46.35	<LOD	195	<LOD	36.15	<LOD	825
473	A4-15	2	7/19/02	<LOD	585	16691.2	1400	1269.6	690	<LOD	915	<LOD	1170	<LOD	225	783.2	500	<LOD	285	<LOD	300	<LOD	180	<LOD	690
476	A4-15	4	7/19/02	<LOD	360	8806.4	780	790	460	<LOD	690	<LOD	1035	<LOD	147.6	<LOD	285	<LOD	180	<LOD	119.7	<LOD	122.25	<LOD	615
469	A4-16	3	7/19/02	<LOD	555	19289.6	1400	<LOD	975	<LOD	930	<LOD	675	<LOD	21.45	<LOD	570	<LOD	180	<LOD	67.2	<LOD	180	<LOD	825
472	A4-16	4	7/19/02	<LOD	465	16000	1100	<LOD	810	<LOD	705	<LOD	810	<LOD	210	530.8	340	<LOD	210	<LOD	20.55	<LOD	25.95	<LOD	570
457	A4-17	4	7/19/02	<LOD	525	15488	1200	1129.6	620	<															

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cd	Cd Error	Ag	Ag Error	Pd	Pd Error
507	A4-1	6	7/19/02	<LOD	7.5	<LOD	225	<LOD	21
510	A4-1	8	7/19/02	<LOD	8.55	<LOD	195	<LOD	67.35
482	A4-2	2.5	7/19/02	<LOD	9.75	<LOD	150	<LOD	85.8
485	A4-2	4	7/19/02	<LOD	93.3	<LOD	210	<LOD	14.25
503	A4-3	2	7/19/02	<LOD	131.85	<LOD	285	<LOD	25.8
506	A4-3	4	7/19/02	<LOD	142.8	<LOD	210	<LOD	16.95
512	A4-4	4	7/20/02	<LOD	144.45	<LOD	300	<LOD	9
515	A4-4	5	7/20/02	<LOD	122.7	<LOD	285	<LOD	143.25
490	A4-6	2	7/19/02	<LOD	85.95	<LOD	315	<LOD	136.35
493	A4-6	4	7/19/02	<LOD	102.9	<LOD	255	<LOD	95.55
520	A4-7	3	7/20/02	<LOD	135.9	<LOD	300	<LOD	127.65
523	A4-7	4	7/20/02	<LOD	10.5	<LOD	315	<LOD	100.05
524	A4-8	5	7/20/02	<LOD	136.65	<LOD	255	<LOD	26.55
527	A4-8	6	7/20/02	<LOD	8.4	<LOD	225	<LOD	79.95
478	A4-9	2	7/19/02	<LOD	129.45	<LOD	270	<LOD	85.8
481	A4-9	4	7/19/02	<LOD	8.1	<LOD	255	<LOD	46.05
516	A4-10	7	7/20/02	<LOD	114	<LOD	345	<LOD	9.75
519	A4-10	8	7/20/02	<LOD	7.95	<LOD	270	<LOD	7.05
486	A4-11	2	7/19/02	<LOD	104.85	<LOD	225	<LOD	23.85
489	A4-11	4	7/19/02	<LOD	32.4	<LOD	270	<LOD	47.25
495	A4-12	2	7/19/02	<LOD	32.25	<LOD	345	<LOD	26.7
498	A4-12	4	7/19/02	<LOD	115.95	<LOD	300	<LOD	8.7
528	A4-13	2.5	7/20/02	<LOD	16.05	<LOD	180	<LOD	12.9
532	A4-13	3.5	7/20/02	<LOD	32.25	<LOD	315	<LOD	88.35
499	A4-14	2	7/19/02	<LOD	28.95	<LOD	255	<LOD	80.55
502	A4-14	4	7/19/02	<LOD	9.3	<LOD	115.95	<LOD	30.9
473	A4-15	2	7/19/02	<LOD	11.55	<LOD	300	<LOD	137.25
476	A4-15	4	7/19/02	<LOD	24.15	<LOD	255	<LOD	19.95
469	A4-16	3	7/19/02	<LOD	150	<LOD	270	<LOD	40.2
472	A4-16	4	7/19/02	<LOD	7.2	<LOD	150	<LOD	66.75
457	A4-17	4	7/19/02	<LOD	24.45	<LOD	210	<LOD	66.45
460	A4-17	6	7/19/02	<LOD	94.5	<LOD	225	<LOD	21.45
449	A4-18	2.5	7/19/02	<LOD	28.35	<LOD	195	<LOD	22.8
452	A4-18	4	7/19/02	<LOD	26.1	<LOD	300	<LOD	81.9
461	A4-19	2	7/19/02	<LOD	35.55	<LOD	165	<LOD	27.6
464	A4-19	3	7/19/02	<LOD	114.15	<LOD	270	<LOD	104.7
545	A4-20	5	7/20/02	<LOD	34.2	<LOD	165	<LOD	27.15
546	A4-20	6	7/20/02	<LOD	165	<LOD	300	<LOD	9
453	A4-21	2.5	7/19/02	<LOD	25.2	<LOD	300	<LOD	21
456	A4-21	4	7/19/02	<LOD	9.9	<LOD	360	<LOD	9.9
465	A4-22	2	7/19/02	<LOD	27.45	<LOD	210	<LOD	90.9
468	A4-22	3	7/19/02	<LOD	21.75	<LOD	180	<LOD	17.4
541	A4-23	3	7/20/02	<LOD	32.85	<LOD	345	<LOD	27
542	A4-23	4	7/20/02	<LOD	9.9	<LOD	240	<LOD	76.35
420	A4-24	2	7/18/02	<LOD	7.2	<LOD	300	<LOD	8.1
423	A4-24	4	7/18/02	<LOD	79.65	<LOD	255	<LOD	21.75
533	A4-25	2	7/20/02	<LOD	7.35	<LOD	150	<LOD	75.75
538	A4-25	3	7/20/02	<LOD	129.75	<LOD	285	<LOD	25.5

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error
213	WA-1	2	07/17/02	<LOD	50.1	186.5	38.4	<LOD	34.2	133.3	62.1	<LOD	49.35	<LOD	23.4	<LOD	37.5	<LOD	29.1	155.3	86.7	<LOD	195	<LOD	315
215	WA-1	4	07/17/02	<LOD	42.9	220.8	38.8	52	23.8	138.6	59.2	72.1	42.7	<LOD	18.9	<LOD	46.35	<LOD	28.65	<LOD	104.1	<LOD	150	<LOD	255
217	WA-2	2	07/17/02	<LOD	48.3	214	40.8	88.6	29.4	173.7	69	<LOD	68.25	<LOD	24	<LOD	45.15	<LOD	23.1	<LOD	122.85	<LOD	195	<LOD	315
220	WA-2	4	07/17/02	<LOD	40.35	232.2	36.5	80.1	24.7	105.5	49.4	<LOD	43.05	<LOD	16.65	<LOD	38.4	<LOD	29.55	<LOD	85.05	<LOD	127.2	<LOD	195
221	WA-3	2	07/17/02	<LOD	53.4	250.8	44.9	39	24.6	143.4	65.7	<LOD	61.65	<LOD	25.2	<LOD	46.8	<LOD	33	233.2	98.8	<LOD	210	365.2	240
224	WA-3	4	07/17/02	<LOD	44.1	232.2	37.3	64.4	23.6	70.9	43.7	<LOD	47.55	<LOD	20.55	<LOD	36.3	<LOD	22.05	<LOD	96.15	<LOD	165	<LOD	270
225	WA-4	2	07/17/02	<LOD	41.1	150.1	31.6	41.2	21.5	119.6	53.3	<LOD	37.2	<LOD	19.65	<LOD	30.45	<LOD	21	440	100	<LOD	195	416.8	200
228	WA-4	4	07/17/02	<LOD	43.35	193.3	37.3	91.8	28.3	148.6	61.8	<LOD	51.6	<LOD	19.5	<LOD	41.4	<LOD	25.5	<LOD	91.95	<LOD	165	<LOD	285
229	WA-5	2	07/17/02	49	31.6	181.5	34.6	83.1	26.2	134.3	56.7	<LOD	45.75	<LOD	15.45	<LOD	32.4	<LOD	30	122.5	72.1	<LOD	165	<LOD	270
232	WA-5	4	07/17/02	<LOD	45.15	142.2	32.9	37.2	22.6	143.9	61.4	<LOD	45.45	<LOD	14.7	<LOD	37.65	<LOD	26.85	215.8	92.1	<LOD	210	773.2	240
233	WA-6	2	07/17/02	<LOD	43.35	217.4	39	37.1	22.4	174.9	65.8	<LOD	46.5	<LOD	23.1	<LOD	37.8	<LOD	26.25	175	83.8	<LOD	180	<LOD	300
236	WA-6	4	07/17/02	<LOD	40.5	212.4	37.6	33.7	21.5	158	61.6	<LOD	38.4	<LOD	19.05	<LOD	29.25	<LOD	29.25	<LOD	105.15	<LOD	180	<LOD	315
237	WA-7	2	07/17/02	<LOD	56.55	238.4	46.6	46	27	<LOD	80.85	<LOD	47.7	<LOD	28.65	<LOD	43.05	<LOD	38.55	1309.6	200	<LOD	285	<LOD	375
240	WA-7	4	07/17/02	<LOD	40.5	184.5	36	62.3	24.9	120.9	56.1	<LOD	37.95	<LOD	22.05	<LOD	30.9	<LOD	26.85	<LOD	106.05	<LOD	165	<LOD	255
257	WA-8	2	07/17/02	<LOD	42.3	213.8	37.3	40.1	21.9	132.1	56.7	73	43.8	<LOD	25.35	<LOD	44.25	<LOD	28.2	1509.6	180	<LOD	225	452	220
261	WA-8	4	07/17/02	<LOD	40.05	239.8	35.6	55.9	21.5	94.6	45.2	175	53.6	<LOD	19.2	<LOD	59.1	<LOD	29.55	2748.8	220	<LOD	195	<LOD	195
260	WA-8-DUP	2	07/17/02	<LOD	47.4	221.4	37.3	<LOD	27.9	96.6	49.5	<LOD	52.35	<LOD	22.5	<LOD	42.6	<LOD	28.05	1500	180	<LOD	225	<LOD	285
263	WA-8-DUP	4	07/17/02	<LOD	39.45	201.1	34.8	63.4	23.5	100.5	49.1	183.3	57.9	<LOD	21	<LOD	65.1	<LOD	33.3	2840	240	<LOD	255	367.4	180
250	WA-9	2	07/17/02	<LOD	54	250.2	44.8	44.2	25.1	122.2	61.3	<LOD	55.8	<LOD	17.7	<LOD	46.2	<LOD	33.15	1220	180	<LOD	300	2179.2	340
247	WA-9-DUP	2	07/17/02	<LOD	47.55	265.8	41.2	37.4	21.7	91.3	49.2	79.3	44	<LOD	22.65	<LOD	48.9	<LOD	30.75	1240	160	<LOD	210	<LOD	270
251	WA-9	4	07/17/02	<LOD	36.75	209	32.9	48.8	20.4	84	42.4	233.2	59.4	<LOD	16.8	<LOD	64.35	<LOD	25.5	1329.6	150	<LOD	195	301	160
256	WA-9	8	07/17/02	<LOD	44.7	163.3	34.8	43.8	23.4	144.9	61.7	<LOD	56.4	<LOD	19.05	<LOD	40.5	<LOD	32.55	698.4	130	<LOD	210	<LOD	315
243	WA-10	2	07/17/02	<LOD	42.75	152.2	32.2	<LOD	28.35	135.2	56.9	<LOD	36	<LOD	23.1	<LOD	35.25	<LOD	25.05	1020	150	<LOD	225	706.8	220
246	WA-10	4	07/17/02	<LOD	42.15	144.6	31.6	<LOD	29.85	93.4	49.4	<LOD	51.45	<LOD	21.45	<LOD	34.2	<LOD	24.15	<LOD	94.2	<LOD	165	<LOD	240

<LOD:Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs	Cs Error	Te	Te Error	Sb	Sb Error	Sn
213	WA-1	2	07/17/02	<LOD	555	17792	1400	<LOD	885	<LOD	795	<LOD	435	<LOD	255	<LOD	450	<LOD	240	<LOD	22.5	<LOD	27.9	<LOD
215	WA-1	4	07/17/02	<LOD	555	17894.4	1300	<LOD	900	<LOD	750	<LOD	645	<LOD	255	<LOD	495	<LOD	148.8	<LOD	195	<LOD	39.3	<LOD
217	WA-2	2	07/17/02	<LOD	525	15296	1200	<LOD	840	<LOD	750	<LOD	1065	<LOD	41.4	<LOD	525	<LOD	165	<LOD	22.05	<LOD	30	<LOD
220	WA-2	4	07/17/02	532.4	280	10598.4	840	<LOD	645	<LOD	570	<LOD	675	<LOD	14.25	<LOD	360	<LOD	165	<LOD	107.85	<LOD	165	<LOD
221	WA-3	2	07/17/02	<LOD	615	21094.4	1600	<LOD	1005	<LOD	855	<LOD	585	<LOD	240	<LOD	585	<LOD	405	<LOD	285	<LOD	50.85	<LOD
224	WA-3	4	07/17/02	<LOD	435	11699.2	920	1280	530	<LOD	750	<LOD	840	<LOD	16.95	<LOD	510	<LOD	34.35	<LOD	146.1	<LOD	30.45	<LOD
225	WA-4	2	07/17/02	<LOD	495	17600	1200	<LOD	750	<LOD	720	<LOD	1244.4	<LOD	330	<LOD	555	<LOD	270	<LOD	180	<LOD	35.7	<LOD
228	WA-4	4	07/17/02	<LOD	480	15590.4	1200	<LOD	810	<LOD	855	<LOD	1350	<LOD	22.8	<LOD	615	<LOD	56.85	<LOD	71.85	<LOD	52.35	<LOD
229	WA-5	2	07/17/02	<LOD	405	10297.6	869.6	<LOD	630	<LOD	600	<LOD	945	<LOD	19.95	<LOD	645	<LOD	180	<LOD	165	<LOD	240	<LOD
232	WA-5	4	07/17/02	<LOD	555	18688	1400	<LOD	870	<LOD	720	<LOD	885	<LOD	17.7	<LOD	435	<LOD	33.75	<LOD	40.95	<LOD	35.25	<LOD
233	WA-6	2	07/17/02	<LOD	450	11296	969.6	<LOD	705	<LOD	750	<LOD	1065	<LOD	345	<LOD	540	<LOD	45	<LOD	22.8	<LOD	195	<LOD
236	WA-6	4	07/17/02	<LOD	465	12000	989.6	<LOD	735	<LOD	765	<LOD	870	<LOD	180	<LOD	165	<LOD	225	<LOD	165	<LOD	46.2	<LOD
237	WA-7	2	07/17/02	<LOD	525	9888	1000	<LOD	780	<LOD	780	<LOD	540	<LOD	147.6	<LOD	435	<LOD	240	<LOD	20.7	<LOD	34.95	<LOD
240	WA-7	4	07/17/02	<LOD	465	11795.2	989.6	<LOD	780	<LOD	690	<LOD	660	<LOD	132.3	<LOD	345	<LOD	150	<LOD	18	<LOD	24	<LOD
257	WA-8	2	07/17/02	<LOD	615	25894.4	1699.2	<LOD	1020	<LOD	885	<LOD	795	<LOD	22.05	<LOD	330	<LOD	315	<LOD	300	<LOD	225	<LOD
261	WA-8	4	07/17/02	<LOD	300	6108.8	580	<LOD	465	<LOD	480	<LOD	495	<LOD	15.3	<LOD	360	<LOD	26.4	<LOD	128.55	<LOD	39.15	<LOD
260	WA-8-DUP	2	07/17/02	984.8	460	27776	1800	5289.6	949.6	<LOD	1005	<LOD	1005	<LOD	210	<LOD	480	<LOD	61.5	<LOD	180	<LOD	180	<LOD
263	WA-8-DUP	4	07/17/02	<LOD	300	6288	620	<LOD	525	<LOD	570	<LOD	885	<LOD	93.45	<LOD	330	<LOD	210	<LOD	44.25	<LOD	42.9	<LOD
250	WA-9	2	07/17/02	<LOD	405	6278.4	740	<LOD	720	<LOD	780	<LOD	900	<LOD	18.45	<LOD	510	<LOD	70.5	<LOD	21.75	<LOD	195	<LOD
247	WA-9-DUP	2	07/17/02	<LOD	375	7475.2	730	<LOD	570	<LOD	570	<LOD	1005	<LOD	17.25	<LOD	435	<LOD	195	<LOD	138.15	<LOD	41.25	<LOD
251	WA-9	4	07/17/02	<LOD	285	5648	550	<LOD	480	<LOD	525	<LOD	600	<LOD	270	<LOD	450	<LOD	225	<LOD	59.7	<LOD	165	<LOD
256	WA-9	8	07/17/02	<LOD	495	14297.6	1100	<LOD	870	<LOD	765	<LOD	585	<LOD	125.85	<LOD	315	<LOD	103.5	<LOD	99.3	<LOD	145.95	<LOD
243	WA-10	2	07/17/02	<LOD	480	14297.6	1100	<LOD	795	<LOD	705	<LOD	465	<LOD	146.4	<LOD	255	<LOD	117.15	<LOD	17.85	<LOD	30	<LOD
246	WA-10	4	07/17/02	<LOD	420	11398.4	949.6	1908.8	600	<LOD	630	<LOD	870	<LOD	180	<LOD	375	<LOD	195	<LOD	137.85	<LOD	41.4	<LOD

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Sn	Error	Cd	Cd	Error	Ag	Ag	Error	Pd	Pd	Error
213	WA-1	2	07/17/02	705	<LOD	9.15	<LOD	225	<LOD	76.8				
215	WA-1	4	07/17/02	660	<LOD	28.95	<LOD	210	<LOD	23.1				
217	WA-2	2	07/17/02	630	<LOD	6.75	<LOD	225	<LOD	29.1				
220	WA-2	4	07/17/02	615	<LOD	129.15	<LOD	225	<LOD	84.6				
221	WA-3	2	07/17/02	810	<LOD	39.9	<LOD	405	<LOD	47.7				
224	WA-3	4	07/17/02	600	<LOD	7.2	<LOD	315	<LOD	8.7				
225	WA-4	2	07/17/02	750	<LOD	12.45	<LOD	225	<LOD	165				
228	WA-4	4	07/17/02	810	<LOD	54.3	<LOD	240	<LOD	150				
229	WA-5	2	07/17/02	840	<LOD	34.5	<LOD	285	<LOD	27.6				
232	WA-5	4	07/17/02	720	<LOD	29.4	<LOD	255	<LOD	23.7				
233	WA-6	2	07/17/02	825	<LOD	165	<LOD	360	<LOD	10.95				
236	WA-6	4	07/17/02	735	<LOD	43.5	<LOD	240	<LOD	35.1				
237	WA-7	2	07/17/02	570	<LOD	139.65	<LOD	255	<LOD	64.65				
240	WA-7	4	07/17/02	600	<LOD	7.05	<LOD	225	<LOD	6.15				
257	WA-8	2	07/17/02	885	<LOD	48.6	<LOD	300	<LOD	39				
261	WA-8	4	07/17/02	645	<LOD	150	<LOD	165	<LOD	5.7				
260	WA-8-DUP	2	07/17/02	855	<LOD	50.85	<LOD	450	<LOD	138.45				
263	WA-8-DUP	4	07/17/02	675	<LOD	130.05	<LOD	285	<LOD	86.25				
250	WA-9	2	07/17/02	750	<LOD	375	<LOD	270	<LOD	12.3				
247	WA-9-DUP	2	07/17/02	660	<LOD	116.4	<LOD	285	<LOD	23.1				
251	WA-9	4	07/17/02	795	<LOD	86.55	<LOD	300	<LOD	148.35				
256	WA-9	8	07/17/02	510	<LOD	97.65	<LOD	165	<LOD	77.85				
243	WA-10	2	07/17/02	570	<LOD	97.5	<LOD	195	<LOD	63.9				
246	WA-10	4	07/17/02	570	<LOD	165	<LOD	240	<LOD	7.8				

<LOD.Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu	Cu Error	Ni	Ni Error
176	NA-1	2	7/17/02	<LOD	42.15	197.5	36.1	32.3	21	86.3	48.3	<LOD	34.05	<LOD	20.7	<LOD	36.6	<LOD	29.1	223.8	88.6	<LOD	195	357.6	210
179	NA-1	4	7/17/02	<LOD	45.75	179.6	37.4	59.5	25.9	89.5	52.9	<LOD	31.8	<LOD	23.7	<LOD	37.2	<LOD	28.95	<LOD	112.65	<LOD	195	<LOD	315
180	NA-2	2	7/17/02	<LOD	45.9	195.6	37.4	65.5	25.6	137.7	59.9	<LOD	47.85	<LOD	17.4	<LOD	40.05	<LOD	27	<LOD	109.2	<LOD	165	<LOD	285
183	NA-2	4	7/17/02	<LOD	42.6	230	39.2	66.3	25.2	142.6	59.4	<LOD	45.15	<LOD	20.7	<LOD	33.3	<LOD	29.7	<LOD	93.45	<LOD	165	<LOD	285
184	NA-3	2	7/17/02	<LOD	42.9	189.2	38.3	35.7	23.1	112.1	57.4	<LOD	49.8	<LOD	24.3	<LOD	39.45	<LOD	24	207	92	<LOD	195	<LOD	330
187	NA-3	4	7/17/02	<LOD	50.4	202.8	39.5	38.3	23.7	196.3	72.4	<LOD	62.1	<LOD	22.5	<LOD	43.65	<LOD	28.05	<LOD	115.65	<LOD	165	<LOD	285
188	NA-4	2	7/17/02	<LOD	44.55	228.8	39.9	59.3	24.9	113.8	55.4	<LOD	47.1	<LOD	26.1	<LOD	38.55	<LOD	29.55	416.4	100	<LOD	165	<LOD	240
191	NA-4	4	7/17/02	<LOD	58.65	135.7	38.6	<LOD	38.85	121	67.9	<LOD	47.85	<LOD	16.05	<LOD	42.9	<LOD	34.95	<LOD	149.4	<LOD	255	1240	330
192	NA-5	2	7/17/02	<LOD	46.65	146	35.7	63.9	27.4	138.1	64.6	<LOD	49.95	<LOD	26.4	<LOD	41.7	<LOD	29.85	196.8	90.6	<LOD	180	<LOD	300
195	NA-5	4	7/17/02	<LOD	45.3	225.6	39.8	74.2	26.6	111	55.2	<LOD	37.35	<LOD	22.35	<LOD	36.9	<LOD	28.65	<LOD	102.45	<LOD	165	<LOD	255
196	NA-6	2	7/17/02	<LOD	42.3	136	32.1	44.5	23.3	148.4	61.7	<LOD	41.7	<LOD	20.85	<LOD	40.8	<LOD	30.75	122.9	80.2	<LOD	195	<LOD	315
199	NA-6	4	7/17/02	<LOD	46.95	234	44.9	107.8	33	99.1	58.9	<LOD	63.3	<LOD	21.45	<LOD	45.75	<LOD	30.45	<LOD	120.3	<LOD	225	1069.6	280
208	NA-7	2	7/17/02	<LOD	51.3	139.4	34.7	43.2	24.6	100.1	56.2	<LOD	49.2	<LOD	27.3	<LOD	38.1	<LOD	26.85	289	100	<LOD	210	618	250
211	NA-7	4	7/17/02	<LOD	45.45	233	40.9	55.2	25	112.4	56.4	<LOD	43.5	<LOD	21.3	<LOD	38.85	<LOD	32.4	<LOD	105.3	<LOD	180	<LOD	330
200	NA-8	2	7/17/02	<LOD	48	166.2	37	44.9	24.8	91	54.2	<LOD	46.95	<LOD	21.9	<LOD	38.25	<LOD	33.45	1868.8	230	<LOD	315	2819.2	370
202	NA-8	4	7/17/02	<LOD	41.25	185.3	35	50	22.9	118.2	54.1	<LOD	37.8	<LOD	17.25	<LOD	34.65	<LOD	28.5	274.2	89.7	<LOD	180	<LOD	285
204	NA-9	2	7/17/02	<LOD	45.3	214	40	<LOD	33.45	116.6	57.7	<LOD	47.4	<LOD	23.1	<LOD	39.75	<LOD	29.85	584.4	130	<LOD	225	470	230
207	NA-9	4	7/17/02	<LOD	49.8	211.8	41.6	88.2	30	92.9	55.5	<LOD	56.25	<LOD	26.4	<LOD	42.75	<LOD	26.55	<LOD	130.95	<LOD	240	2499.2	350
383	NA-10	2.5	7/18/02	<LOD	45.45	261	42.6	47.3	23.6	158.7	63.4	<LOD	39.6	<LOD	21	<LOD	39.15	<LOD	26.7	636	140	<LOD	270	4080	410
386	NA-10	4	7/18/02	<LOD	39.45	169.6	29	51.5	19.8	127.3	47.8	<LOD	40.5	<LOD	18	<LOD	30	<LOD	21.6	<LOD	84.75	<LOD	138.75	<LOD	210

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area

(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	Eu	Eu Error	La	La Error	Ba	Ba Error	Cs	Cs Error	Te	Te Error	Sb	Sb Error	Sn	Sn Error
176	NA-1	2	7/17/02	<LOD	465	13696	1100	<LOD	810	<LOD	675	<LOD	510	<LOD	315	<LOD	525	<LOD	150	<LOD	165	<LOD	34.05	<LOD	780
179	NA-1	4	7/17/02	<LOD	510	13696	1100	<LOD	870	<LOD	750	<LOD	1125	<LOD	240	804.4	460	<LOD	195	<LOD	41.85	<LOD	35.25	<LOD	750
180	NA-2	2	7/17/02	<LOD	570	19891.2	1400	<LOD	930	<LOD	795	<LOD	960	<LOD	22.65	<LOD	600	<LOD	57.15	<LOD	59.55	<LOD	225	<LOD	870
183	NA-2	4	7/17/02	<LOD	435	10099.2	880	778	500	<LOD	675	<LOD	615	<LOD	195	<LOD	510	<LOD	165	<LOD	21.6	<LOD	29.4	<LOD	675
184	NA-3	2	7/17/02	<LOD	645	23091.2	1699.2	<LOD	1080	<LOD	945	<LOD	750	<LOD	180	<LOD	525	<LOD	255	<LOD	210	<LOD	33.15	<LOD	675
187	NA-3	4	7/17/02	<LOD	600	20492.8	1500	1060	700	<LOD	915	<LOD	705	<LOD	129.45	<LOD	330	<LOD	80.85	<LOD	111.6	<LOD	110.1	<LOD	630
188	NA-4	2	7/17/02	<LOD	420	10796.8	940	<LOD	750	<LOD	720	<LOD	705	<LOD	18.6	<LOD	360	<LOD	195	<LOD	23.85	<LOD	32.1	<LOD	795
191	NA-4	4	7/17/02	<LOD	495	7084.8	900	<LOD	795	<LOD	825	<LOD	1080	<LOD	195	<LOD	330	<LOD	210	<LOD	22.2	<LOD	28.65	<LOD	630
192	NA-5	2	7/17/02	<LOD	630	22195.2	1699.2	<LOD	1095	<LOD	885	<LOD	735	<LOD	210	<LOD	450	<LOD	35.55	<LOD	20.55	<LOD	165	<LOD	735
195	NA-5	4	7/17/02	<LOD	405	8576	820	<LOD	675	<LOD	600	<LOD	750	<LOD	141.45	<LOD	405	<LOD	225	<LOD	165	<LOD	165	<LOD	630
196	NA-6	2	7/17/02	<LOD	540	18188.8	1300	<LOD	855	<LOD	855	<LOD	660	<LOD	12.3	<LOD	180	<LOD	150	<LOD	120.45	<LOD	90.6	<LOD	480
199	NA-6	4	7/17/02	<LOD	525	10899.2	1000	<LOD	795	<LOD	795	<LOD	900	<LOD	19.95	1109.6	550	<LOD	270	<LOD	195	<LOD	195	<LOD	675
208	NA-7	2	7/17/02	<LOD	555	15897.6	1300	<LOD	975	<LOD	900	<LOD	855	<LOD	165	<LOD	480	<LOD	210	<LOD	133.5	<LOD	31.2	<LOD	660
211	NA-7	4	7/17/02	<LOD	525	16396.8	1300	<LOD	840	<LOD	750	<LOD	330	<LOD	240	<LOD	765	<LOD	65.4	<LOD	270	<LOD	210	<LOD	690
200	NA-8	2	7/17/02	<LOD	450	9235.2	920	<LOD	795	<LOD	795	<LOD	430	<LOD	19.1	<LOD	420	<LOD	250	<LOD	32.1	<LOD	27.9	<LOD	660
202	NA-8	4	7/17/02	<LOD	405	10297.6	880	<LOD	720	<LOD	690	<LOD	510	<LOD	14.3	<LOD	762	<LOD	180	<LOD	25.1	<LOD	33.1	<LOD	630
204	NA-9	2	7/17/02	<LOD	570	16499.2	1300	<LOD	915	<LOD	780	<LOD	720	<LOD	165	<LOD	405	<LOD	136.35	<LOD	132.6	<LOD	28.95	<LOD	630
207	NA-9	4	7/17/02	<LOD	525	12198.4	1100	<LOD	840	<LOD	750	<LOD	825	<LOD	165	<LOD	510	<LOD	137.25	<LOD	180	<LOD	31.65	<LOD	660
383	NA-10	2.5	7/18/02	<LOD	525	15795.2	1200	<LOD	870	<LOD	765	<LOD	540	<LOD	117.75	<LOD	315	<LOD	180	<LOD	100.8	<LOD	100.8	<LOD	600
386	NA-10	4	7/18/02	<LOD	315	9158.4	700	<LOD	540	<LOD	525	<LOD	705	<LOD	15	<LOD	315	<LOD	285	<LOD	123.45	<LOD	128.25	<LOD	600

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cd	Cd Error	Ag	Ag Error	Pd	Pd Error
176	NA-1	2	7/17/02	<LOD	9.3	<LOD	270	<LOD	7.2
179	NA-1	4	7/17/02	<LOD	29.4	<LOD	315	<LOD	75.75
180	NA-2	2	7/17/02	<LOD	65.7	<LOD	300	<LOD	35.25
183	NA-2	4	7/17/02	<LOD	9.3	<LOD	285	<LOD	87.9
184	NA-3	2	7/17/02	<LOD	9	<LOD	225	<LOD	80.7
187	NA-3	4	7/17/02	<LOD	36.75	<LOD	210	<LOD	63.3
188	NA-4	2	7/17/02	<LOD	11.1	<LOD	330	<LOD	104.55
191	NA-4	4	7/17/02	<LOD	6.9	<LOD	240	<LOD	6.6
192	NA-5	2	7/17/02	<LOD	9.3	<LOD	360	<LOD	9.75
195	NA-5	4	7/17/02	<LOD	32.7	<LOD	225	<LOD	89.1
196	NA-6	2	7/17/02	<LOD	72.15	<LOD	150	<LOD	4.5
199	NA-6	4	7/17/02	<LOD	38.4	<LOD	225	<LOD	31.05
208	NA-7	2	7/17/02	<LOD	59.85	<LOD	210	<LOD	73.95
211	NA-7	4	7/17/02	<LOD	10.05	<LOD	300	<LOD	107.7
200	NA-8	2	7/17/02	<LOD	21.3	<LOD	330	<LOD	6.7
202	NA-8	4	7/17/02	<LOD	7.5	<LOD	230	<LOD	7.6
204	NA-9	2	7/17/02	<LOD	8.25	<LOD	240	<LOD	73.65
207	NA-9	4	7/17/02	<LOD	12.6	<LOD	240	<LOD	87.45
383	NA-10	2.5	7/18/02	<LOD	84.15	<LOD	225	<LOD	30.75
386	NA-10	4	7/18/02	<LOD	6.9	<LOD	195	<LOD	5.25

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 1 of 3)

XLNo	Boring Location	Depth (ft)	Date	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	Rb	Rb Error	Pb	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	Cu
164	MA-1	3	7/17/02	<LOD	53.4	205	43.1	80.1	30.7	<LOD	82.05	<LOD	56.25	<LOD	26.1	<LOD	47.85	<LOD	32.4	476	130	<LOD
167	MA-1	4	7/17/02	<LOD	52.05	211.8	41.7	77.4	28.8	<LOD	70.2	<LOD	46.05	<LOD	22.35	<LOD	39.15	<LOD	29.7	210	91.1	<LOD
154	MA-2	3	7/17/02	<LOD	40.95	265.2	41.4	90.3	27.2	112.2	53.6	<LOD	45.75	<LOD	18.3	<LOD	35.4	<LOD	22.2	327	92.8	<LOD
157	MA-2	4	7/17/02	<LOD	35.85	135.1	28.2	42.6	20.1	69.6	40.6	<LOD	27	<LOD	19.5	<LOD	28.05	<LOD	16.2	<LOD	86.25	<LOD
158	MA-3	6	7/17/02	<LOD	39.15	179.1	31.1	<LOD	26.1	<LOD	47.4	<LOD	44.1	<LOD	15.75	<LOD	32.7	<LOD	19.2	<LOD	85.35	<LOD
161	MA-3	8	7/17/02	<LOD	44.85	251.8	38.1	75.1	24.2	63	41.3	<LOD	32.55	<LOD	15.15	<LOD	30.9	<LOD	25.35	<LOD	91.8	<LOD
146	MA-4	6	7/17/02	<LOD	46.05	211.4	38	54.2	24	144.8	60	<LOD	47.1	<LOD	19.05	<LOD	32.4	<LOD	26.4	261.6	92.1	<LOD
149	MA-4	8	7/17/02	<LOD	45.75	248.8	39.8	57.5	23.7	113.2	53.2	<LOD	44.7	<LOD	16.65	<LOD	34.5	<LOD	26.4	493.2	110	<LOD
150	MA-5	3	7/17/02	<LOD	42.9	185.7	35.1	44.1	22.4	164.5	61.9	<LOD	53.4	<LOD	22.8	<LOD	41.25	<LOD	26.55	398	100	<LOD
153	MA-5	4	7/17/02	<LOD	47.55	171.3	37.6	45.2	24.9	134.2	63.1	<LOD	49.2	<LOD	21.45	<LOD	42.75	<LOD	31.65	313	110	<LOD
142	MA-6	4	7/17/02	<LOD	45.45	169.6	35.5	62.9	25.6	131.6	59.5	<LOD	47.4	<LOD	21.15	<LOD	39.15	<LOD	31.65	1739.2	200	<LOD
145	MA-6	6	7/17/02	<LOD	43.5	208.2	36.7	56.9	23.6	148.7	59	<LOD	50.85	<LOD	23.25	<LOD	37.5	<LOD	24.75	186.3	76	<LOD
138	MA-7	2	7/17/02	<LOD	44.55	169.3	34.1	51.7	23.4	124	55.9	<LOD	47.25	<LOD	18.75	<LOD	37.5	<LOD	26.55	193.5	82.8	<LOD
141	MA-7	4	7/17/02	<LOD	45.15	254	39.6	77.9	25.4	92.3	48.6	<LOD	46.05	<LOD	19.2	<LOD	34.35	<LOD	23.85	<LOD	92.7	<LOD
168	MA-8	2	7/17/02	<LOD	36.9	211.6	29.7	48.8	18.3	126.7	44.3	<LOD	36	<LOD	12.45	<LOD	30.3	<LOD	18	295	78.8	<LOD
171	MA-8	4	7/17/02	<LOD	37.2	203.2	29.2	82.3	21	120.7	43.8	<LOD	34.05	<LOD	17.7	<LOD	30.9	<LOD	23.7	195.9	64	<LOD
172	MA-9	2	7/17/02	<LOD	53.55	222.2	42.1	64.8	27.1	114.3	59.2	<LOD	40.05	<LOD	26.25	<LOD	38.55	<LOD	31.65	1500	200	<LOD
175	MA-9	4	7/17/02	<LOD	49.35	163.2	40	48.3	27.4	<LOD	82.2	<LOD	54.15	<LOD	26.55	<LOD	46.8	<LOD	35.7	1180	190	<LOD
137	MA-10	2	7/17/02	<LOD	45.9	233.8	37.9	60.1	23.4	133.7	55.3	<LOD	44.85	<LOD	23.4	<LOD	30	<LOD	22.35	272.6	83.9	<LOD
134	MA-10	4	7/17/02	<LOD	42.75	176.5	34	44.3	22.2	144.4	58.3	<LOD	41.25	<LOD	25.5	<LOD	32.4	<LOD	30.45	262.4	86.2	<LOD

<LOD: Below detection limit

Appendix C: XRF Data for the Manufacturing Area
(Page 2 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cu	Error	Ni	Ni	Error	Co	Co	Error	Fe	Fe	Error	Mn	Mn	Error	Cr	Cr	Error	Eu	Eu	Error	La	La	Error	Ba	Ba	Error	Cs				
164	MA-1	3	7/17/02	255	<LOD	420	<LOD	975	48793.6	3299.2	<LOD	1650	1244.4	<LOD	1080	20.25	<LOD	300	<LOD	300	<LOD	210	<LOD	405	<LOD	457.2	300	<LOD						
167	MA-1	4	7/17/02	180	<LOD	270	<LOD	330	5600	680	<LOD	600	615	<LOD	840	210	<LOD	405	<LOD	405	<LOD	195	<LOD	330	<LOD	195	457.2	300	<LOD					
154	MA-2	3	7/17/02	180	<LOD	255	<LOD	360	7449.6	730	1420	510	705	<LOD	915	195	<LOD	457.2	300	<LOD	180	<LOD	330	<LOD	180	<LOD	330	<LOD						
157	MA-2	4	7/17/02	147.9	<LOD	225	<LOD	300	5968	590	1819.2	480	615	<LOD	870	180	<LOD	330	<LOD	330	<LOD	180	<LOD	330	<LOD	180	<LOD	330	<LOD					
158	MA-3	6	7/17/02	138.15	<LOD	210	<LOD	375	10195.2	810	3478.4	630	675	<LOD	870	195	<LOD	420	<LOD	420	<LOD	210	<LOD	375	<LOD	195	<LOD	420	<LOD					
161	MA-3	8	7/17/02	130.5	<LOD	195	<LOD	300	5228.8	560	<LOD	510	540	<LOD	1170	135.3	<LOD	661.2	350	<LOD	1050	<LOD	102.75	986.4	510	<LOD	135.3	<LOD	661.2	350	<LOD			
146	MA-4	6	7/17/02	195	639.6	220	<LOD	480	14092.8	1100	<LOD	840	780	<LOD	1050	102.75	<LOD	986.4	510	<LOD	780	<LOD	630	<LOD	210	<LOD	375	<LOD	210	<LOD				
149	MA-4	8	7/17/02	180	<LOD	285	<LOD	420	11897.6	960	<LOD	735	750	<LOD	630	210	<LOD	375	<LOD	375	<LOD	210	<LOD	375	<LOD	195	<LOD	420	<LOD	195	<LOD			
150	MA-5	3	7/17/02	180	<LOD	285	<LOD	540	20390.4	1400	<LOD	945	840	<LOD	495	133.5	<LOD	360	<LOD	360	<LOD	840	<LOD	495	<LOD	133.5	<LOD	360	<LOD	133.5	<LOD			
153	MA-5	4	7/17/02	210	<LOD	345	<LOD	555	17792	1400	<LOD	975	810	<LOD	600	285	<LOD	510	<LOD	510	<LOD	600	<LOD	285	<LOD	510	<LOD	285	<LOD	510	<LOD			
142	MA-6	4	7/17/02	240	<LOD	270	<LOD	540	17689.6	1300	<LOD	930	840	<LOD	1170	255	<LOD	375	<LOD	375	<LOD	255	<LOD	1170	<LOD	255	<LOD	375	<LOD	255	<LOD			
145	MA-6	6	7/17/02	141.15	<LOD	240	<LOD	405	8985.6	810	863.2	480	705	<LOD	1125	17.7	<LOD	570	<LOD	570	<LOD	17.7	<LOD	570	<LOD	1125	<LOD	17.7	<LOD	570	<LOD			
138	MA-7	2	7/17/02	180	<LOD	300	<LOD	525	17996.8	1300	<LOD	870	750	<LOD	1155	615.6	<LOD	410	<LOD	410	<LOD	750	<LOD	1155	<LOD	195	615.6	410	<LOD	195	<LOD	615.6	410	<LOD
141	MA-7	4	7/17/02	146.1	<LOD	240	<LOD	450	13491.2	1000	<LOD	750	675	<LOD	405	15.6	<LOD	330	<LOD	330	<LOD	405	<LOD	15.6	<LOD	330	<LOD	15.6	<LOD	330	<LOD	15.6	<LOD	
168	MA-8	2	7/17/02	180	1289.6	210	<LOD	405	16000	949.6	1089.6	480	690	<LOD	750	180	<LOD	465	<LOD	465	<LOD	690	<LOD	750	<LOD	180	<LOD	465	<LOD	180	<LOD	465	<LOD	
171	MA-8	4	7/17/02	131.25	<LOD	195	<LOD	345	12000	770	<LOD	600	555	<LOD	795	14.25	<LOD	453.2	<LOD	290	<LOD	555	<LOD	795	<LOD	14.25	453.2	290	<LOD	14.25	453.2	290	<LOD	
172	MA-9	2	7/17/02	240	<LOD	300	<LOD	570	16998.4	1400	<LOD	975	870	<LOD	1230	225	<LOD	510	<LOD	510	<LOD	870	<LOD	1230	<LOD	225	<LOD	510	<LOD	225	<LOD	510	<LOD	
175	MA-9	4	7/17/02	270	<LOD	390	<LOD	495	10496	1100	<LOD	855	780	<LOD	570	225	<LOD	435	<LOD	435	<LOD	780	<LOD	570	<LOD	225	<LOD	435	<LOD	225	<LOD	435	<LOD	
137	MA-10	2	7/17/02	150	<LOD	255	<LOD	390	8934.4	790	<LOD	630	690	<LOD	525	180	<LOD	360	<LOD	360	<LOD	690	<LOD	525	<LOD	180	<LOD	360	<LOD	180	<LOD	360	<LOD	
134	MA-10	4	7/17/02	165	<LOD	255	<LOD	465	14796.8	1100	<LOD	780	750	<LOD	1020	255	<LOD	560	<LOD	560	<LOD	750	<LOD	1020	<LOD	255	<LOD	867.2	560	<LOD				

<LOD:Below detection limit

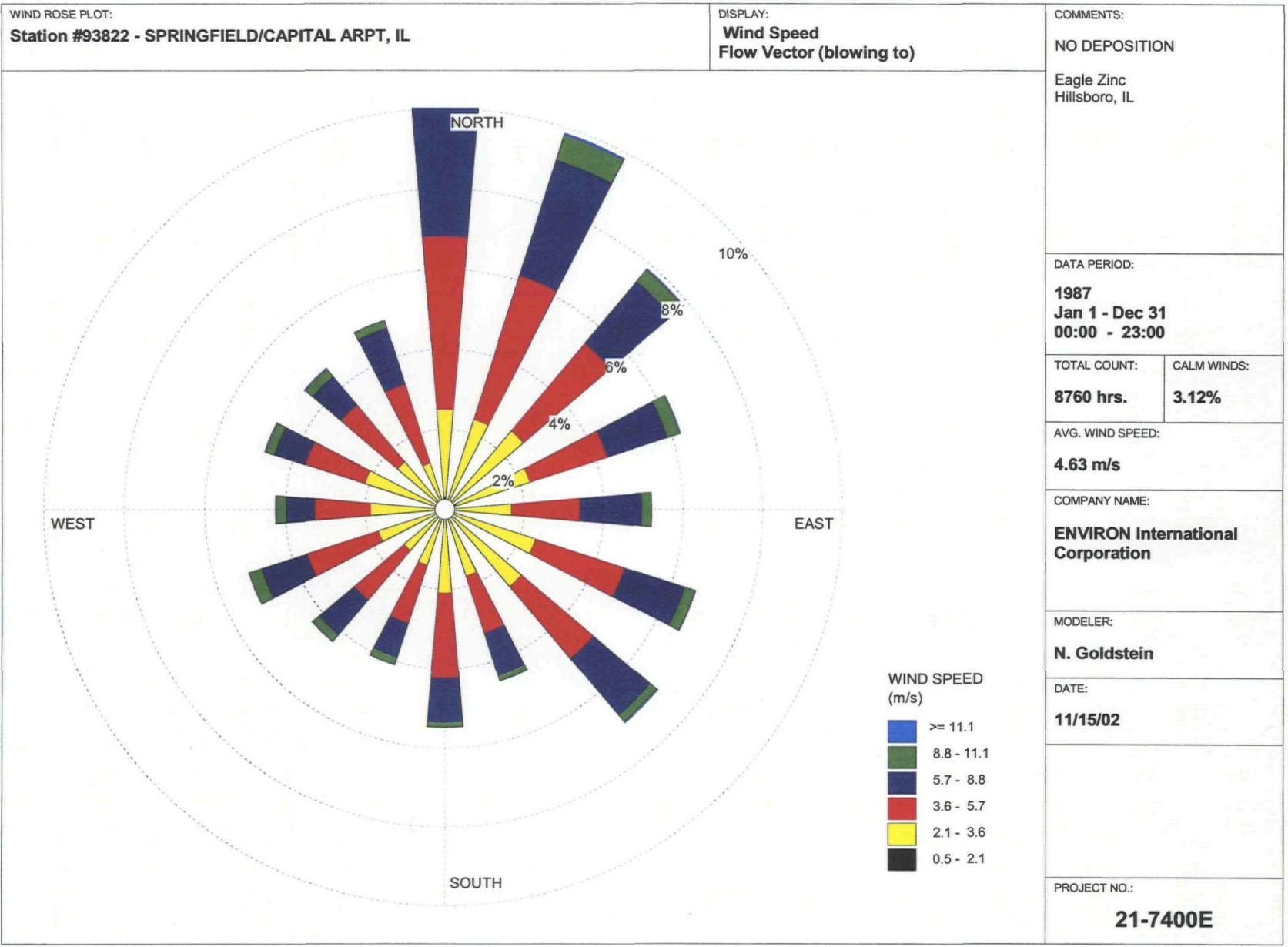
Appendix C: XRF Data for the Manufacturing Area
(Page 3 of 3)

XLNo	Boring Location	Depth (ft)	Date	Cs	Error	Te	Te	Error	Sb	Sb	Error	Sn	Sn	Error	Cd	Cd	Error	Ag	Ag	Error	Pd	Pd	Error
164	MA-1	3	7/17/02	43.65	<LOD	52.95	<LOD		195	<LOD		825	<LOD		165	<LOD		270	<LOD		150		
167	MA-1	4	7/17/02	33.6	<LOD	20.55	<LOD		165	<LOD		720	<LOD		8.4	<LOD		255	<LOD		6.9		
154	MA-2	3	7/17/02	111.6	<LOD	195	<LOD		115.2	<LOD		600	<LOD		22.95	<LOD		240	<LOD		62.7		
157	MA-2	4	7/17/02	31.95	<LOD	40.2	<LOD		40.5	<LOD		690	<LOD		121.05	<LOD		270	<LOD		80.4		
158	MA-3	6	7/17/02	270	<LOD	225	<LOD		43.65	<LOD		780	<LOD		74.55	<LOD		270	<LOD		84.45		
161	MA-3	8	7/17/02	180	<LOD	19.35	<LOD		24.9	<LOD		660	<LOD		26.4	<LOD		255	<LOD		83.7		
146	MA-4	6	7/17/02	195	<LOD	195	<LOD		39	<LOD		735	<LOD		28.65	<LOD		225	<LOD		22.8		
149	MA-4	8	7/17/02	126.75	<LOD	105.45	<LOD		136.95	<LOD		600	<LOD		42.3	<LOD		140.85	<LOD		33.75		
150	MA-5	3	7/17/02	40.2	<LOD	150	<LOD		150	<LOD		570	<LOD		22.2	<LOD		138.9	<LOD		84.15		
153	MA-5	4	7/17/02	138.45	<LOD	134.4	<LOD		137.25	<LOD		660	<LOD		27	<LOD		195	<LOD		36.6		
142	MA-6	4	7/17/02	35.25	<LOD	39.9	<LOD		34.65	<LOD		675	<LOD		28.2	<LOD		225	<LOD		22.95		
145	MA-6	6	7/17/02	225	<LOD	225	<LOD		41.55	<LOD		705	<LOD		131.1	<LOD		270	<LOD		8.25		
138	MA-7	2	7/17/02	150	<LOD	149.4	<LOD		31.65	<LOD		735	<LOD		8.85	<LOD		270	<LOD		7.35		
141	MA-7	4	7/17/02	360	<LOD	25.2	<LOD		33.3	<LOD		690	<LOD		110.4	<LOD		210	<LOD		72.3		
168	MA-8	2	7/17/02	255	<LOD	210	<LOD		33.15	<LOD		675	<LOD		7.8	<LOD		225	<LOD		6.15		
171	MA-8	4	7/17/02	126	<LOD	103.8	<LOD		31.05	<LOD		585	<LOD		102.6	<LOD		195	<LOD		62.25		
172	MA-9	2	7/17/02	195	<LOD	180	<LOD		45.3	<LOD		750	<LOD		37.2	<LOD		255	<LOD		55.65		
175	MA-9	4	7/17/02	270	<LOD	22.5	<LOD		132.6	<LOD		705	<LOD		8.55	<LOD		210	<LOD		29.55		
137	MA-10	2	7/17/02	143.7	<LOD	140.1	<LOD		30.3	<LOD		780	<LOD		8.85	<LOD		138.9	<LOD		3.6		
134	MA-10	4	7/17/02	210	<LOD	255	<LOD		285	<LOD		870	<LOD		11.4	<LOD		345	<LOD		9.45		

<LOD: Below detection limit

A P P E N D I X D

Wind Rose Diagram



A P P E N D I X E

Zinc/Cadmium Correlation for Soils

Appendix E: Zinc/Cadmium Correlation for Soils

